THE GLOBAL FUND AND TUBERCULOSIS IN NICARAGUA: MAKING LINKS BETWEEN GLOBAL POLICY AND LOCAL EXPERIENCES

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ABSTRACT

The Global Fund to Fight AIDS, Tuberculosis & Malaria (GF) offers new approaches and challenges in international aid for health. Little research is available exploring the experiences of individuals and communities working within the confines of GF policies in Latin America. The study fills this gap through a qualitative exploration of local experiences with tuberculosis (TB) services and the GF in Nicaragua.

This study sought to examine local stakeholders' (administrators, health personnel and persons affected by TB) experiences related to GF policies relevant to TB services in Nicaragua. The study drew from a population health perspective and was informed by an ethnomethodological approach. Key themes focused on TB control, health systems and health rights. Data collection involved contextual analysis, participant observation, in-depth interviews and focus groups. The study involved 6 months of fieldwork in Nicaragua from November 2005-April 2006. Fieldwork was conducted with the support, participation and assistance of the Centre for Health Research and Studies, the Damian Foundation and the National Tuberculosis Control Program.

Analysis of findings shows various internal and external challenges in communication/procedural and disbursement/execution aspects of the GF grant. In TB control, participants identified private sector participation, case detection & reduced abandonment as improvements resulting from the GF project, though sustainability was a key concern. In health systems, concerns of efficiency and efficacy in the use of funds were commonly expressed. The focus on human resource development via the GF was considered a strength of the project. Community participation and the reduction of stigma, two facets of health rights, were perceived to have improved through the GF grant; however, remain identified as key issues for improving the context of TB in Nicaragua.

The experiences of people working to implement or receiving TB services and GF activities in Nicaragua offer valuable insight into the strengths and challenges of this country-driven approach to aid for health. The GF needs to give more attention to such experiences a resource for improving flexibility and assuring sustainability in program strengthening and human resource development.

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LIST OF ABBREVIATIONS

Abbreviation	Definition
BREB	Behavioural Research Ethics Board
BCG	Bacillus Calmette Guerin (Vaccine)
CCM	Country-coordinating Mechanism
CDR	Case detection rate
CONAPAT	Committee for the Support of Persons Affected by Tuberculosis
CIES	Centro de Investigaciones y Estudios de la Salud
DFID	(British) Department for International Develpment
DHS	Demographic Health Survey
DOTS	Directly observed therapy short-course
EM	Ethnomethodology
FETSALUD	Spanish Acronym for the Health Workers' Union in Nicaragua
FSLN	Frente Sandanista de la Liberación Nacional
Global Fund	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GFP	Global Fund Project
GHP	Global Health Partnership
HPIC	Heavily-indebted Poor Country
ICESCR	International Covenant on Economic, Social and Cultural Rights
IMF	International Monetary Fund
INSS	Instituto Nacional de Seguridad Social/ National Institute for Social Security
IUATLD	International Union Against Tuberculosis & Lung Disease
LFA	Local Fund Agent
LMIC	Low-middle Income Countries
MDG	Millennium Development Goals
MDRTB	Multi-drug resistant tuberculosis
MINSA	Ministerio de Salud/Ministry of Health
NGO	Non-governmental organization
NTP	National Tuberculosis Control Program
NPS	Non-prioritized SILAIS
PAHO	Pan-American Health Organization
PATB	Persons Affected by Tuberculosis
PHC	Primary Health Care
PO	Participant Observation
PR	Principal Recipient
PRSPs	Poverty Reduction Strategy Papers
PS	Prioritized SILAIS
SAP	Structural Adjustment Programs
SILAIS	Sistemas Locales de Atención Integrada a la Salud
Sm+	Smear-positive case (of TB)
SPHC	Selective Primary Health Care
SWAp(s)	Sector-wide Approach(es)
SWEF	System-wide Effects of the Fund Research Network
TB	Tuberculosis
TRP	Technical Review Panel
UN	United Nations
UNDP	United Nations Development Programme
USD	American Dollars
US	United States
UNICEF	United Nations Children's Fund
WB	World Bank
WHO	World Health Organization

Chapter 1 Introduction & Background

Tuberculosis (TB) is one of the greatest contributors to the overall global burden of disease and can be considered an outcome of both local and global population health determinants. The WHO estimated 8.9 million new cases of TB and 1.7 million deaths attributable to TB in 2004 (1), an increase from 2000 for both (2). The global burden of tuberculosis is exacerbated by the HIV pandemic and the emergence of multi-drug resistant TB (MDRTB) (1-6). The World Bank (WB), the World Health Organization (WHO) and the International Union Against TB & Lung Disease (IUATLD) have supported standardized national TB control programs as a highly effective and cost-efficient strategy for addressing TB since the early 1990's (7-9). The challenges of successful TB control are made more complex in the context of globalization and an increasing sense of global vulnerability to this disease (10). TB is listed among the Millennium Development Goals (MDGs)[1] as one of three targeted diseases for the improvement of global health (11). This attention, combined with strong global policy support, adds to the environment of heightened awareness of the impact of TB on global health and the need for relevant, efficient and responsive financing policy.

One such policy response has been the development of the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). This G8[2] supported initiative is an innovative approach to international financial aid coordination and disbursement targeted at health (12). The granting policies of the Global Fund promote enhanced collaboration between public and private health services, strengthening of scientifically sound programming and the enhancement or expansion of existing country-led programs (13). There are a number of large-scale studies underway that explore impacts of global health

[1] MDG's are listed among the United Nations' Millennium Declaration as targets for global development for the year 2015 and are discussed in more detail in Chapter II. Details can be found at the UN MDG homepage: http://www.un.org/millenniumgoals/

[2] The G8, or Group of Eight, is an informal group of eight countries (Canada, Japan, the United States, Germany, the United Kingdom, Italy, France and Russia) that meet annually to discuss broad economic and foreign policies. More information can be found at: http://www.g8.gc.ca/common/faq-en.asp

partnerships in general (14), the impacts of the Global Fund on health systems (15, 16), and the progress of Global Fund projects (17, 18). These studies have largely focused on African countries and little research exploring Global Fund-related impacts or experiences is available from a Latin American perspective.

Nicaragua, the Latin American case study country for this research, has a complicated political and economic history within which the Global Fund proposal and guidelines policies have been interpreted and carried out. On 7 October 2003, Nicaragua signed an agreement for a Global Fund grant to reduce incidence and mortality from TB in the seven departments (regions) of Matagalpa, Jinotega, Chinandega, Chontales, the Autonomous Regions of the Atlantic Coast (North & South) and Managua; integrating citizen participation in the planning and implementation of the funded activities is part of the agreement (19). The challenges facing Nicaragua in achieving success, sustainability and effectiveness in these two goals are many. The over-arching research question driving this study was: *What are people experiencing with the Global Fund in Nicaragua & how is it having an impact at a local level?*

The purpose of this ethnomethodological case study was to discover and examine local stakeholders' experiences and understandings of, or related to, Global Fund policies relevant to TB services in Nicaragua from a population health perspective. Because this study attempted to make connections between Global Fund policies and local experiences (and was the first to do so in Nicaragua), an exploratory design was chosen. Local experiences with the first phase of the TB component of the Global Fund to Nicaragua were studied, with a focus on three key interest areas: TB control, health systems and health rights[3] (see Table 1.1). Four methods of data collection were engaged over a six-month period of fieldwork (November 2005 – April 2006) with the support of the *Centro de Investigaciones y Estudios de la Salud* (CIES) and the Damian Foundation. These methods included contextual analysis drawing from the literature, participant observation, in-depth interviews, and a focus group. Participant observation was integrated throughout the

[3] The human right to health was defined as outlined in General Comment 14 of Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR). See: Substantive issues arising in the implementation of the International Covenant on Economic, Social and Cultural Rights: General comment No. 14. The right to the highest attainable standard of health: General comments, 2000. 11 Aug 2000 [cited 2005 25Feb]; Document on the Internet]. Available from: http://www.unhchr.ch/tbs/doc.nsf/(symbol)/E.C.12.2000.4.En?OpenDocument.

fieldwork period and included participation in both formal and informal activities of the National Tuberculosis Control Program (NTP), TB clinics and TB clubs.

Multiple levels of policy capacity and influence were explored using an analytical framework (20) linking globalization phenomena to health outcomes, adapted to reflect both experiential and contextual dimensions of each of the framework's levels. For the purposes of this study, *stakeholders* were defined as belonging to one of three groups: administrators, clinicians and persons affected by TB (PATB). *Policies* were defined as any deliberate decision, action or inaction of the Global Fund (i.e. grant approval, grant submission process, fund disbursements, et cetera).

Table 1.1: Research Questions by Key Interest Area

Key Interest Area	Research Questions
TB Control	• What impacts has Global Fund funding had on TB control at the clinic level? • What populations are benefiting from the administration of Global Fund grant at the local level? How are marginalized, remote and/or impoverished groups being reached? • How has the funded program been effective in removing barriers to accessible treatment and testing for TB?
Health Services	• How have resources and efforts at addressing the private sector been affected by the Global Fund grant? • How has the movement of health personnel between public and private health systems been affected? • What effect has program funding had on other health initiatives such as maternal-child health, immunization and nutrition programs?
Right to Health	• How has the right to health been protected and/or addressed through the funded program? • How has the presence of the funded program had an affect on the fundamental right to health for communities in affected areas?

1.1 Map of Nicaragua

The Global Fund project (GFP) in Nicaragua prioritizes seven departments with higher incidence of TB, greater inequalities and poverty and challenges with geographic accessibility. The map below provides the boundaries of Nicaragua's 15 departments and 2 autonomous regions.

Figure 1.1 Map of Nicaragua[4]

[4] From: http://images.google.com/imgres?imgurl=http://www.lib.utexas.edu/maps/americas/nicaragua_rel85.jpg&imgrefurl=http://www.lib.utexas.edu/maps/nicaragua.html&h=1048&w=1058&sz=250&tbnid=OnomWgyM3XnO1M:&tbnh=149&tbnw=150&prev=/images%3Fq%3Dmap%2Bof%2Bnicaragua&start=3&sa=X&oi=images&ct=image&cd=3

1.2 Study Approach

This study looked at the Nicaraguan experience with the Global Fund from a population health perspective through the use of an analytical framework that links global policies to local experiences. The following sections provide an overview of the concepts of population health and globalization. It introduces how population health research can inform policy and explores the dimensions and levels of the analytical framework.

1.2.1 A Population Health Perspective

Population health is both a way of thinking about health and a framework for building policy. Population health seeks to develop and apply knowledge on and responsive policy for the interconnected conditions and factors influencing the health of populations (21). It is a broad, 'upstream'[5] approach to health concerned with understanding how structural and procedural aspects of society affect a population. Health is considered a reflection of resource capacity, collective economic and social history and functioning performance, extending to the political structures which form policy (22). Population health frameworks, in turn, demonstrate health as an outcome influenced and measured by a set of complex interactions and pathways between and within a variety of socioeconomic, environmental, structural and individual determinants (23).

The goal of this study is to connect local experiences with global policies through an analytical framework that examines historical, political and economic aspects of a complex interplay of contexts. Through the acknowledgement of the social, economic and environmental determinants of health and the deconstruction of contextual interactions, this study examines the experiences of the Global Fund in Nicaragua from a population health perspective. Accordingly, the key interest areas and research questions draw from a population health perspective that demands the inclusion of these contextual dimensions. A conceptual model of population health that acknowledges these dimensions underlines the analytical framework and was critical to reaching the goal of the study.

The complexities of practicing population health are presented in a comprehensive model offered by the Health Promotion Division of the Public Health Agency of Canada

[5] The term 'upstream' is a descriptor commonly used in population health that refers to looking at and addressing the distal sources or underlying roots of health outcomes, rather than only intervening in these outcomes after they have become manifest as 'downstream' diseases.

(see Figure 1.2 below) (24). The authors suggest a marriage of the analytical insights offered by the concept of population health with the practical, action-oriented principles of health promotion. The model was developed with three critical questions in mind: on what should we take action; how should we take action; and with whom should we act? This three-dimensional model is a representation of population health promotion as an activity that can occur across various levels of action, specific population health determinants and the five core strategies of health promotion as outlined in the Ottawa Charter (25). The goal of these actions is displayed as evidence-based decision-making that draws from research, evaluation and experiential learning. This model acknowledges the underlying values and assumptions that influence each of the interacting layers of the model. In addition, the model provides opportunity for considering both macro- and micro-level contexts. The combination of a population health perspective with health promotion strategies offers direction in guiding policy decisions affecting health.

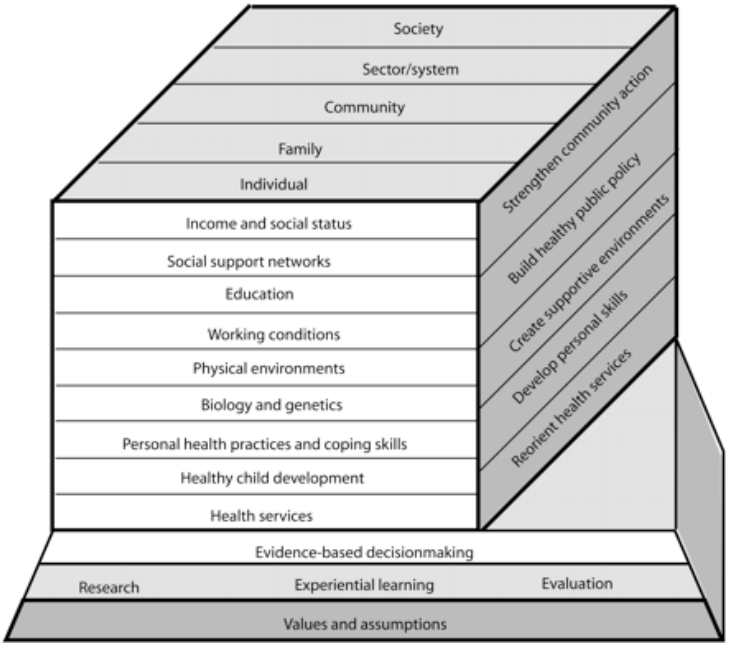

Figure 1.2: Model for Population Health Promotion

Labonte *et al.* offer an exploration of the historical development, epistemology, and theory behind population health discourse in Canada (26). The article provides a discussion of population health that challenges why and how social inequalities become health

inequalities and argues for a *critical* approach to population health research. The goals of such an approach are offered as:

> (1) a thorough…deconstruction of how historically specific social structures, economic relationships and ideological assumptions serve to create and reinforce conditions that perpetuate and legitimize conditions that undermine the health of specific populations; and (2) a normative political project that, as a result of deeper understanding, seeks the reconstruction of social, economic and political relations (p. 10) (26).

The authors emphasize the importance of working simultaneously with policy-makers and civil society in the research process, stating "equity-oriented policy change is unlikely to occur without an informed civil society capable of exercising political pressure (power) to overcome opposition by economic and class-based groups…" (p. 11-12) (26). Perhaps most critically, the authors suggest that population health will remain marginalized in policy debates if it fails to articulate clear and achievable policy options. This critical population health approach emphasizes research that is participatory, diverse and no longer politically neutral. Population health research is thus a political statement, embedded in current social contexts and structures, the findings from which can serve as a resource to advocate for change.

1.2.2 Exploring Big Pictures: Researching from a population health perspective

The purpose of population health research is to describe, explain, predict and control health problems or policies through multi-disciplinary collaboration and mixed-methodology (27). Population health research examines broad social, political, environmental, structural and individual determinants of health in order to find ways to influence policy that can contribute to greater overall population health and well-being. This necessitates research that produces relevant, clearly articulated results calling for reasonable policy responses. Pallan and Foster (28) discuss the challenges and potentials of integrating population health research findings into policy, suggesting that recognizing the importance of broad health determinants in informing social policy and achieving this in fact are dramatically different processes. They emphasize the need for researchers to understand policy-making processes and the challenges in balancing competing interests among government departments with differing priorities. The complex nature of socio-structural and environmental determinants

of health that are addressed through a population health approach demand greater researcher creativity in both study design and presentation if research is to be translated into policy.

This challenge has been addressed through a variety of innovative approaches and methods of research. Population health research takes advantage of the richness found in multiple sources of data to develop a comprehensive understanding of how a disease can be described, explained, predicted and controlled. Data sources can be primary or secondary, quantitative or qualitative or a combination of multiple levels of data. Qualitative studies in population health seek to develop concepts that assist in the understanding of social phenomena and structures in natural settings. Qualitative approaches are context-based and do not seek broad generalizability, offering instead rich information to understand how people act in, and give meaning to, their lives (29).

1.2.3 Communicating Research: Getting policy research to matter to policy-makers

Health-related research can serve policy makers in two ways: first, it can provide information about current health issues and how they are affecting populations; and second, it can evaluate current, past or prospective policy and its capacity to positively influence current health issues and their effects on populations. Providing research that is useful for policy development, however, is an ongoing challenge for researchers. A 2002 study involved a workshop of seven senior policy actors in the health arena, including representatives from the United Kingdom and the United States (US), exploring ways in which the social science evidence base for public policy could be improved. The study suggests that there are three key influences for how evidence informs policy: evidence is required at both the micro (local) and macro (national/international) levels; researchers need to understand policy processes; and public opinion has to be considered, whether or not it is in agreement with available evidence. They highlighted participants' comments on the need for timely, valid research initiatives that take advantage of 'windows of opportunity' and research reports that present evidence in an interesting, story-like format. The authors conclude that clarity, relevance and timeliness are key components of effective research for informing policy and emphasize the need for non-traditional approaches to presenting evidence in attractive, simple ways (30). Researchers' priorities in sum should be responsive

to policy environments by developing approaches, methods and ways of representing data that are accessible and informative for policy makers.

The central questions facing policy-makers for TB control remain how to develop new, or enhance existing, approaches that better reach TB affected populations. The availability and accessibility of timely research is critical if policy development is to have the greatest impact in improving population health. The opportunities offered by globalization of information technologies have created space for researchers to collaborate in more timely ways and to synthesize large bodies of data. Such opportunities to share evidence globally about the outcomes and effectiveness of health policy can therefore be translated into improved health policy at the local level (31). The need for evidence that connects global policies with local contexts in lower-middle income countries (LMIC) further demands research that provides a portrait of local contexts and needs (32). Given the recent developments in global policy directed at TB control, research responding to the connection between global policy and local contexts is both relevant and timely, particularly to understand how well funding institutions, such as the Global Fund, are affecting health outcomes.

1.3 Globalization & Health: Making connections

1.3.1 Processes of Globalization: Policy implications of a globalized world

Contemporary globalization has a complex relationship with health. Recent global norms of multilateralism have expanded the flow of capital, technology, goods, services and information, reduced the role of nation-states (33) and resulted in new and diverse health challenges. Population health is broadly affected by three aspects of the globalization phenomena: economic globalization and the ascendance of deregulated international trade and investment markets; technological globalization, particularly of communication technologies; and cultural globalization, wherein one set of cultural ideals is increasingly dominant (22). These aspects of globalization have resulted in decreased government capacity to contain and control policies affecting health. This is particularly true in an environment of increasing pluralism among policy actors and a dominant economic ideology emphasizing reduced state role in social welfare. The result of these two phenomena is a 'residual state' whose power to control or affect policy influencing the determinants of health is diminished (34). This reduced state capacity to create, maintain or control policies

affecting health is exacerbated by an additional aspect of globalization: increased migration and travel with a consequent trans-nationalization of health risks related to infectious diseases (10, 35, 36).

Responses to these issues are further challenged by the impact of economic globalization on poverty. The (now) globalized discourse and model of economic development is one driven primarily by a neoliberal[6], market-based philosophy that promotes free trade, corporate taxation concessions and investment incentives, and reductions in public spending on health, education and welfare (22). Those who support neoliberalism believe this particular model of globalization accelerates economic progress by facilitating the expansion of wealth followed by the advancement of health and equity. The putative benefits of unconstrained global private markets driven by corporate interests, however, have been challenged by evidence of increasing social inequity. The latter argument posits that benefits of globalization may reach only a small portion of a population, resulting in increased disparities in wealth and health both within and between nation states (36). Neoliberal policy changes over the last twenty years have been associated with rising inequality between and within populations which, by definition, reduces the pace at which poverty is alleviated by income growth (37). This implies that, despite the recognition of poverty and income distribution as significant determinants of health (36), poverty is not being reduced by policy changes associated with economic globalization.

1.4 A Framework for Globalization and Health

This study sought to connect global and local contexts by adopting a framework that outlines health outcome pathways from global contexts to local, individual experiences (20) (see Figure 1.3). The framework offers five key points for understanding how contemporary globalization can affect health. First, over-arching processes and policies occurring at supra-national levels are explored. These processes include forces of globalization and global contexts of infectious diseases as well as those policies produced by global structures such as the WHO or the Global Fund. These are processes super-ordinate to globalization (though influenced by it) that influence a nation's political systems and policy-making social

[6] For a detailed discussion on neoliberalism, a term used to describe an economic liberalization philosophy that de-emphasizes government roles in social spending and promotes liberalized, free-market trade and economic policy, please see Free Trade and Globalization (2005)—A primer on neoliberalism at: http://www.globalissues.org/TradeRelated/FreeTrade/Neoliberalism.asp

stratification, and political, economic and civil society traditions, as well as pre-existing endowments including level of economic development, human and social capital and demographic structure. All of these shape how globalization transpires and affects health outcomes within a particular country.

Second, macro-economic policies are identified as primary driving forces of contemporary globalization. These forces create policy spaces with both positive and negative impacts for national governments in regulatory and spending flexibility as well as public sector capacity. Of particular interest are changes and restrictions to autonomous national policy decision-making power through loan aid or debt forgiveness conditionalities and/or trade agreement obligations. Next, the political, social and economic histories of individual countries shape how contemporary globalization affects health. The fourth level of impact is seen at the local or regional level as communities attempt to cope with rapid urbanization (primarily globalization induced) while managing programs and services for their populations, often with fewer resources. Finally, the household and individual's freedoms, choices and behaviours will be influenced by income distribution and subsistence production as well as health, education and social expenditures in both time and money. Each of these levels influences, and is influenced by, environmental pathways (20). Health outcomes at individual, household and population levels are thus the result of the interactions of processes and forces from global policy forums through to individual and household responses. This model was adapted to represent these five levels of policy space while reflecting contextual and experiential dimensions of the connections between a global policy forum and local experiences explored in this study.

The impacts and consequences of globalization relative to human health and development may be positive in some situations and negative in others (20). Under conditions of rapid liberalization with little government support to affected populations, globalization has generally been damaging to some populations (38). Short-term benefits of globalization-induced economic growth (when it does occur) further depend upon the equitable distribution of new wealth (20). The cascading cycle of health impacts may not be immediately visible, but over longer periods of time may entrench, rather than reduce, poverty and its multiple associated consequences.

The potential for health benefit as a result of globalization is therefore dependent upon two key aspects of the policy process: first, what definitions are used by researchers

and policy actors to drive decisions and policies intended to protect, promote or facilitate such benefit; and second, whether the multi-level, complex and cascading impacts that a particular policy *may* have are considered from a comprehensive perspective. The benefits of globalization will be optimized when the improvement of health and well-being of all people through resource development and the facilitation of pre-requisites for health are central state and global policy objectives (39). This analytical framework was used to guide the exploration of both contextual and experienced dimensions of this study. The following chapter provides an overview of the methodological approach and analytical framework used to guide this study. Chapter 3 provides an analysis of the contextual dimensions of the case study through an exploration of the complex body of literature relevant to the study. Chapter 4 moves into experienced dimensions of the framework and the thesis concludes with a discussion of the results, their significance and limitations in Chapter 5.

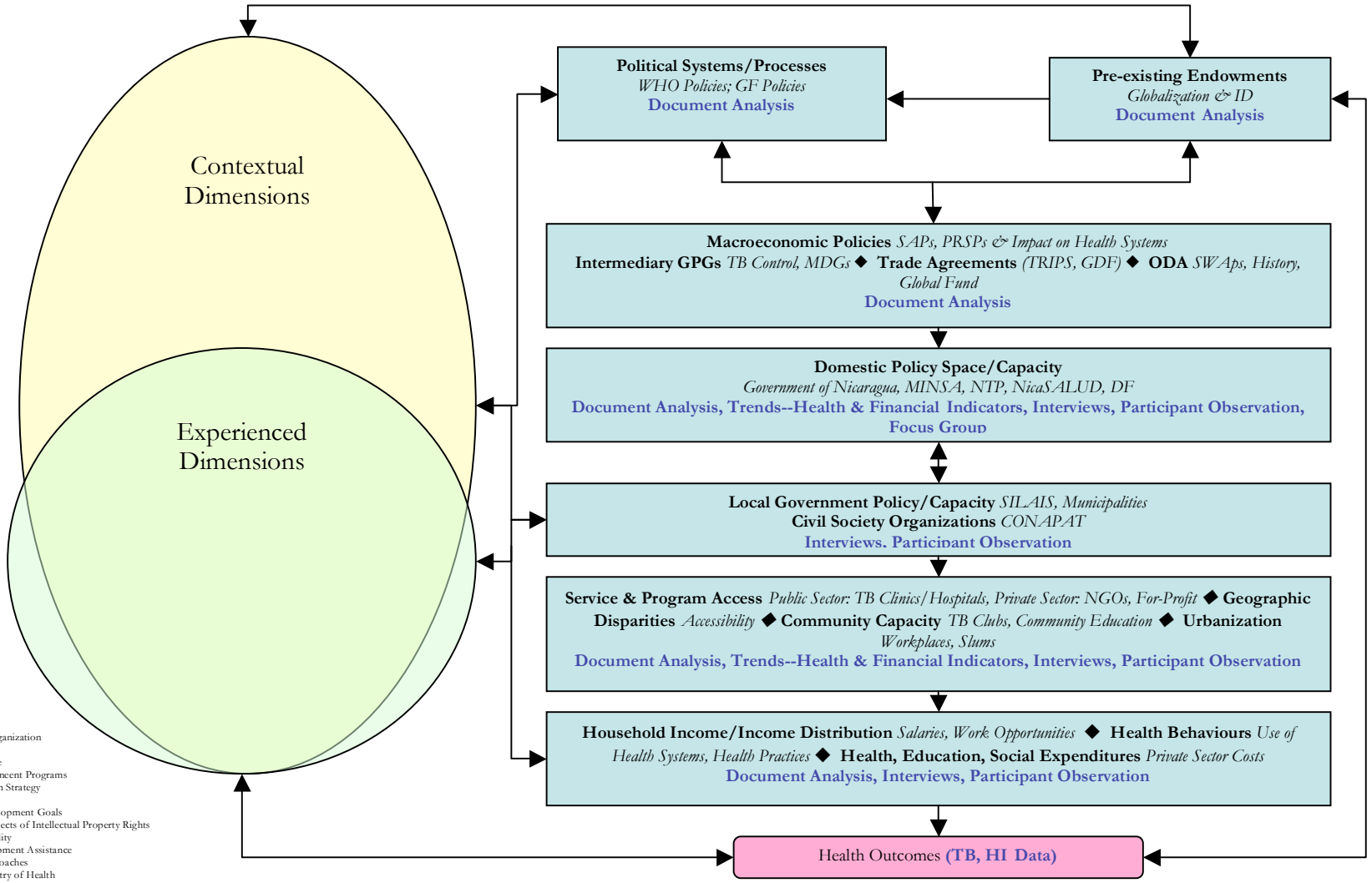

Table of Acronyms
(In order of appearance)

WHO	World Health Organization
GF	Global Fund
ID	Infectious Disease
SAP	Structural Adjustmeent Programs
PRSP	Poverty Reduction Strategy
TB	Tuberculosis
MDG	Millennium Development Goals
TRIPS	Trade-related Aspects of Intellectual Property Rights
GDF	Global Drug Facility
ODA	Overseas Development Assistance
SWAPs	Sector-wide Approaches
MINSA	Nicaragua's Ministry of Health
NTP	National TB Control Program
NicaSALUD	Principle Recipient, Global Fund grant in Nicaragua
DF	Damian Foundation
SILAIS	Regional Health Authorities in Nicaragua
CONAPAT	Committee for the Support of Persons Affected by TB
NGO	Non-governmental organization
HI	Health Indicator

Figure 1.3: Linking Global Policy & Local Experiences--Analytical Framework

Chapter 2 Paradigmatic Approach & Methodology

2.1 Introduction

This ethnomethodologically informed case study engages a number of methods and draws from a variety of data sources to connect local experiences, relative to the TB component over the first phase of a grant, with a global financing instrument, the Global Fund. This chapter provides an overview of the methodological framework and rationale used to design this study. The appropriateness of the selected methodological approach is illustrated by revisiting the analytical framework and research questions presented earlier. A discussion of the study's methodological approach and associated tools for data collection facilitate the exploration of the multiple contextual layers outlined in the analytical framework. The use of a population health model is discussed as an essential component for conceptualizing of the research setting and framing the research questions. The chapter moves into a technical discussion of the four main tools used for data collection. Sampling strategies are discussed and a summary of participants is provided. A discussion of rigor is followed by a detailed description of the analytical process used to organize and present the data. The chapter concludes with comments on translation and the ethical conduction of this research.

2.2 Methodological Approach

This study sought to make links between global policy and local experience through the experiences and understandings of individuals within a specific, time-bound context—the TB component of the first phase of the Global Fund grant for Nicaragua. A critical population health perspective acknowledging the complex interaction of multiple determinants of health guided the exploration of local stakeholders' experiences with the Global Fund. Both research questions and elements of the analytical framework used in this study draw from the social, structural, economic and environmental determinants of health proposed in the model of population health offered in Chapter 1. Connections between

local experiences and the policies of the Global Fund were made through the exploration of interacting contextual and experiential dimensions at super-ordinate, macro-economic, national, regional and local levels (see Figure 2.1). The experiences of participants were considered to be inextricable from the multiple layers of historical, institutional, national and local contexts in which they were explored. The study's exploration of a time-bound experience with a specific setting and emphasis on deep contextualization lends itself well to an ethnomethodological case-study approach.

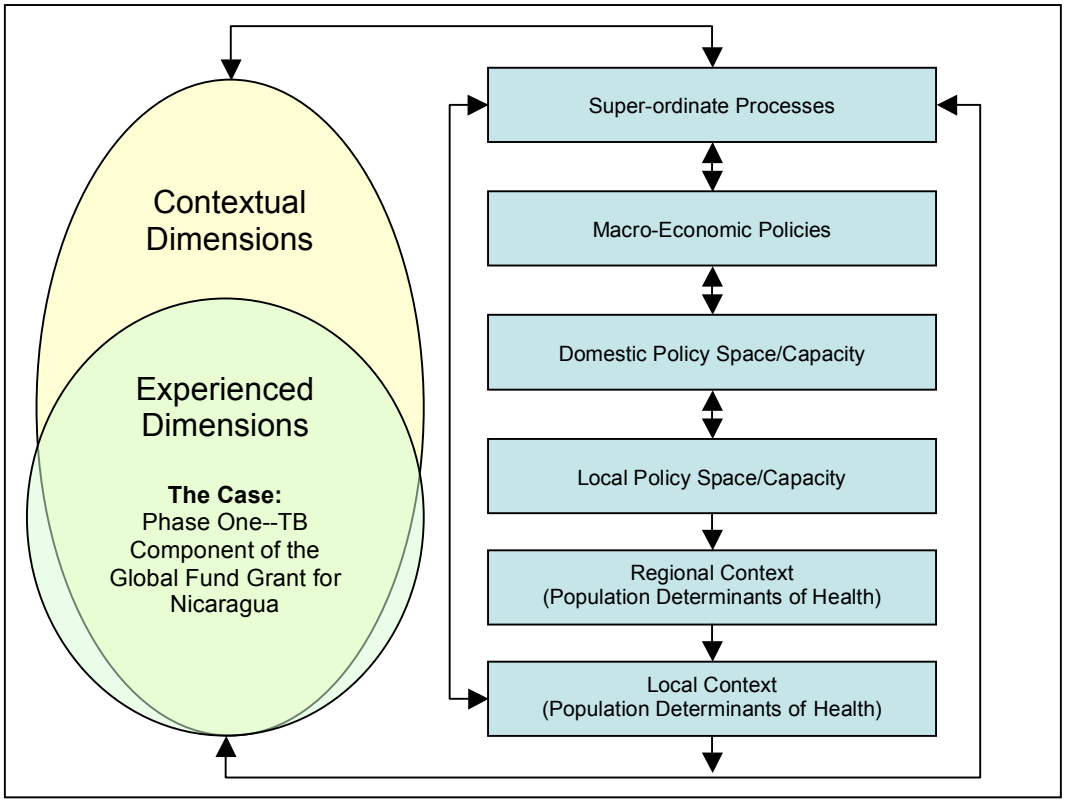

Figure 2.1 Summarized Analytical Framework

2.3 A Case Study: The Global Fund & TB in Nicaragua

Case studies concentrate on understanding the complexities of a "bounded system" (p. 135), as one case among others, to place attention on what can be learned from the specific case (40). The case is the focus of investigation, clearly defined and particular in its nature, historical background, contexts and stakeholders. This approach allows for flexibility

in the methods chosen to gather thick descriptive data and offers opportunities for comparisons to other cases with shared characteristics (40), other Global Fund grants, for example. In this study, the case is defined as the first phase of the Global Fund grant for Nicaragua's "Commitment and Action Against Tuberculosis" (p. 1), as described in the Program Grant Agreement (41). The case is bound in time from the development of the proposal for the grant to the completion of the first phase of funding in April 2006.

Within this case, the interpretation of Global Fund policies and guidelines has led to a particular organizational definition, direction and delineation of a program that is experienced as part of the everyday lives of people working for or affected by TB. Stakeholders interpret and understand the Global Fund in Nicaragua through their own lives and experiences. Every-day activities are both *what* and *how* people make sense of the policies and structures introduced by the presence of the Global Fund. Exploring this case study with ethnomethodology offers a set of tools that allow for the consideration of the everyday activities and practices of the multiple stakeholders connected to or affected by the Global Fund grant in Nicaragua.

2.4 Why Ethnomethodology?

Ethnomethodology (EM) emerged from the work of sociologist Harold Garfinkel and is interested in the explication of how social facts[7] are organized (42). This complex methodology seeks to detail ways in which members of a society or context, often simply referred to as 'members', make sense of and understand an everyday reality or idea. Emphasis is placed on local, daily reality (42), demanding and providing space for deep consideration of context (43). Whereas much of the writing on traditional ethnography focuses on the exploration and examination of language as the context for a social setting[8], EM allows for a deeper exploration of the taken-for-granted realities of individuals living within a particular setting (44). One objective of EM is to describe how an organization's structure and order, including in understanding causal links, are elucidated through members'

[7] For a more detailed summary of the history behind ethonomethodology, refer to Chapter 2, *Ethnomethodology's Perspective*, of Paul ten Have's (2004) book, *Understanding Qualitative Research and Ethnomethodology*.

[8] See, for example, Spradley (The Ethnographic Interview. Fort Worth: Harcort Brace Jovanovich College Publishers; 1979) or Tedlock (Ethnography and ethnographic representation. In: Denzin NK, Lincoln YS, editors. Strategies of Qualitative Inquiry. 2nd ed. Thousand Oaks: Sage Publications; 2003. p. 165-213)

descriptive accounts. Where sociology would examine behaviour as governed or motivated by shared values and expectations, EM observes "…how conduct is described and explained with reference to rules, values, motives…" (p. 142) and structural delimitations of a context (43). Lynch and Peyrot comment on the diversity of research that has emerged from an EM approach, emphasizing this methodology can be useful in many different settings and to explore a variety of research problems (45). In each case, EM endeavours to "analytically unpack relational configurations that enable sense to be made and understood *in situ"* (p. 114) (45). The strengths EM offers this study are in its emphasis on the complex context of meaning and the interest in defining, examining and interpreting how members make sense of the structural boundaries of the case explored.

This study seeks to explicate experiences related to the Global Fund, as a defined set of policy frameworks and guidelines providing structural boundaries for directives, actions and motivations within the context of the TB component of the Global Fund grant in Nicaragua. Therefore, the 'social order', in this study is the particular environment and context created by the Global Fund's presence in supporting TB control in Nicaragua. In EM, the circumstances that provide the context for meaning are self-generated (43); here, the policy set outlined by the Global Fund as a financing instrument, with its flexibilities and inflexibilities, creates these circumstances. The deep consideration of context in EM allows for the exploration of the multiple layers of culture and context influencing and shaping the experiences of members tied somehow to the NTP. The attention paid to interactive, discursive aspects of study settings (46) validates the selection of participant observation, open interviews and discourse to explicate the Global Fund as a policy forum having an impact on the definitions of activities within the Nicaraguan context.

2.5 Methods

A variety of qualitative methods were used to explore and examine local experiences relevant to the Global Fund within the context of TB in Nicaragua. These methods included open-ended, in-depth interviews and observation followed by cyclical, responsive data collection and analysis. The purpose of this study was to discover and examine local stakeholders' experiences and understandings of, or related to, GF policies relevant to TB services in Nicaragua. Briefly, stakeholders were people who were working in or affected by TB in Nicaragua and were defined as administrators, clinicians or persons affected by TB

(PATB). Inclusion criteria are elaborated below. The study was conducted in two departments of Nicaragua prioritized under the TB-component of the Global Fund project (GFP) from November 2005 through April 2006. The research process involved an initial observation period of approximately two months followed by cyclical process of data collection and constant comparative analysis over the remaining months.

2.5.1 Data Collection

The study included four methods for data collection: contextual synthesis and analysis of the literature, participant observation, in-depth open-ended interviews, and a focus group activity.

2.5.1.1 Contextual Synthesis and Analysis

This study explored a complex research problem set within a richly interwoven historical and contextual background. A critical and comprehensive consideration of available literature, relevant documents and published administrative data has been synthesized in the literature review and integrated throughout the reflective process of data collection and analysis. The former is explored in Chapter 3 as the research problem and context are described in detail. The analysis of relevant documents provides additional contextual synthesis by drawing from the frameworks and policies provided by the Global Fund as structural and procedural delimitations for country-led projects. The documents considered as core sources of data within the analysis framework included (see Table 4.2, p. 90): Global Fund policy documents and guidelines that delineate the range of acceptable grant applications; the formal grant agreement between the primary recipient and the Global Fund; Global Fund policy and guideline documents for performance-based funding; the NTP Annual Report for the years 1999-2005 and current national guidelines document; the IUATLD guidelines for the management of TB; and the WHO guidelines for national TB programs. Administrative data was used to provide triangulation between themes emerging from other methods of data collection. The contextualization of the study is re-visited in the presentation of the results and the discussion (Chapters 3-5).

2.5.1.2 Participant Observation

Participant observation (PO) serves two primary purposes in qualitative studies: the process of PO allows the researcher to experience being both within and extraneous to a setting (47); and observation offers benefits to a study design by allowing the researcher to capture and understand more holistically the contexts within which people are interacting, facilitating open discovery that allows inductive, rather than *a priori*, conceptualizations (46). Participant observation offers the potential to learn about the setting in ways which may not be discovered through interviews alone and to establish trust and familiarity between the researcher and those involved with the research setting (46). PO is considered key to achieving the detailed description of context demanded by EM (43).

The act of PO requires a strong sense of awareness, constant reflective introspection and the ability to focus on both details and the broader context of a setting simultaneously (46, 47). Patton offers a series of proficiencies for the skilled observer. These include the ability to be attentive, to be cognizant of the senses, to develop skill and practice in descriptive writing, to be disciplined in recording field notes, to know how to identify key details, to be able to triangulate observations and to be cognizant of the strengths and limitations of one's own perspective (46). The researcher's background and experience are in nursing, a profession in which these skills are integrated through the on-going introspection and critical reflection components of nursing education and practice.

Participant observation was carried out by the researcher throughout the study period and was facilitated through the support of CIES and the Damian Foundation. The initial observational period was spent focusing on the translation of documents, searching for in-country literature and informants to contribute to the development of deeper contextual understanding and building rapport with both CIES and the Damian Foundation. Observation following this included visits to peripheral TB centers already involved in the existing research program of CIES and the Damian Foundation; participation in administrative meetings, national and local activities; and time spent with participants in both formal and informal settings. During the period of participant observation, detailed field notes and a journal were kept to document the research process, progress and provide a structured space for continuous reflection.

2.5.1.3 In-depth Interviews

The majority of raw data gathered in this study emerged from in-depth interviews. I conducted a total of seventeen interviews with nineteen participants from each of the administrative, clinical or PATB groups. The interviews were in Spanish, were digitally recorded, and averaged one hour in duration. Each interview commenced with a review of the consent process, including permission to audio-record the session. Digital recordings were stored both on the device's memory chip and on CD. Transcription began as soon as possible following the interview and was completed by the researcher or one of two research assistants. Recordings, transcripts and interview notes were each coded for anonymity and kept separate from any identifying documents, including consent forms.

The interview framework was based on the elements of the ethnographic interview as outlined by Spradley (48) which includes descriptive, structural and contrast categories of questions. This interview framework complements EM's attempt to detail an idea or issue through the daily experiences of members. The use of these categories of questions was also important because it allowed the inclusion of study participants who may not have direct knowledge or experience with the Global Fund, such as PATB and some health personnel; but who, through their daily experiences and interactions with the NTP, may be experiencing changes, benefits or challenges associated with the Global Fund. Using descriptive, structural and contrast questions to explore everyday experiences created opportunities to understand the impacts of the Global Fund at the most local level without requiring participants to know what Global Fund policies are.

Descriptive questions provide an opportunity for the researcher to become familiar with the participant's language, and an overview of the experiences of the informant. This type of question focuses on a 'grand tour' of the everyday life of the informant (48). For the purposes of this study, descriptive questions were used as a means of exploring each informant's perceptions and understandings of the context of TB in their population through the exploration of their daily life. Structural questions are intended to explore how informants have organized their knowledge and experience, and are asked concurrently with descriptive questions. These questions include inquiries around what different kinds of things exist in a particular area or theme area. Structural questions also include the verification of language, terms and semantics of different domains of a particular term. Contrast questions draw from the principle that the meaning of a symbol can be discovered

through learning how it is different from other symbols and seek to determine the contrasts among concepts, confirming or directly elucidating differences and similarities between terms (48). These categories of questions are explored through a set of principles for ethnographic interviewing.

These principles include the following activities: opening the interview with appropriate greetings; providing explanations about the project, interview process and recording devices; using asymmetrical turn taking (i.e. allowing the interviewee to provide the majority of the content of the interview); expressing interest in the informant's responses; repeating, restating and incorporating the informant's terms; creating hypothetical situations; and taking leave at an appropriate time (48). This procedural guide for constructing the logistic of each interview was facilitated through the consent process, wherein greetings were followed by a description of the study, its intents and the rights of participants; the building of trust and rapport with participants through responsiveness and attentiveness; and the structure of the interviews themselves as guided, reflexive, open and constructed from the unique experience of each participant.

The interview guides, structured around the three key areas of interest (TB control, health systems and health rights) were developed for each participant category as a flexible resource to direct the interview process (see Appendix B). It was anticipated that the breadth of these topics would not be covered in each individual interview, nor would these topics represent an exclusive or exhaustive list of the issues relevant to the experience of the Global Fund in Nicaragua. Some informants' experiences, roles and backgrounds made their understandings of a specific question more relevant than others. Interviews were therefore responsive and directed at each informant's area of expertise. Participants were invited to explore their experiences through dialogue, using the questions as cues to stimulate reflection on their understanding of an issue or idea as interpreted through their everyday life. The responsive, open nature of this process allowed for the elucidation of a number of interesting and critical issues that were not named as key areas of interest prior to the study.

Exploring the area of health rights posed a challenge in that participants not could be expected to have the same understanding of what they encompass. In order to provide consistency in the consideration of health rights by participants, cue cards were used as prompts, offering opportunities for member checking. The right to health was defined using

words and phrases from General Comment 14 of Article 12 of the ICESCR (See Appendix C). Study participants were shown the card asked to comment on if and how they felt the listed factors contributed to vulnerability to TB in their community, how they felt the factors were being, or could be, addressed by the GFP. If a participant hesitated when looking at the card, the researcher listed the factors verbally and reframed the question to ensure the participant understood what was being asked.

2.5.1.4 Focus Group

As emerging themes were explored from interviews and observational data, detailed questions about some of the challenges faced by stakeholders in the context of TB control in Nicaragua became apparent. Focus groups, a form of group interviewing, can offer the researcher opportunities to explore specific questions after having already completed considerable research. The interviewer directs the inquiry and interaction among participants in either a structured or unstructured format, depending on the purpose of the activity, and data can be used for the purposes of triangulation or as a complement to other techniques (49). In this case, the focus group was intended to explore specific issues that had emerged through the interviewing process, but remained incomplete in their exploration (see Table 2.1 below). The activity was thus structured and directed, with focus maintained on an agenda of questions distributed to participants in advance (see Appendix D).

Fontana and Frey suggest that the skills needed to conduct focus groups parallel those necessary for interviewing in general; however, they highlight three specific challenges for researchers engaging this particular method. The interviewer must facilitate equal participation by minimizing domination by one participant or a small group of participants and encouraging quiet or "recalcitrant" (p. 73) individuals to participate while ensuring all participants have an opportunity to speak (49). The researcher can therefore be considered as a facilitator within a group dynamic. The structured nature and the small number of participants of the focus group in this study enabled greater control over potentially challenging group dynamics.

A focus group was conducted with participants who were members of the CONAPAT. The activity was conducted in Spanish. Participants had copies of the question agenda in front of them for the duration of the session, allowing for notes to be taken while others were speaking. The activity began with greetings and casual conversation as we

waited for all of the participants to arrive[9]. Participants were invited to sit together and were asked to keep their copy of the question agenda in front of them. An introduction to the activity and how it would proceed was provided and the consent process was reviewed. The researcher read the questions and participants were invited to respond. Each participant was asked to respond individually before the question was opened for group discussion. Once participants felt they had nothing further to contribute to a particular question or discussion, the researcher proceeded with the next question. This process continued until the final question, which offered an opportunity for participants to suggest ways in which they would like to see the study's findings shared with them. This final question became an informal discussion and was left open with the researcher responding to questions and suggestions as they arose. The focus group was digitally recorded and transcribed.

Table 2.1: Questions Explored by the Focus Group

- What does the Global Fund mean for the sustainability of TB care in Nicaragua?
- How could we continue to improve the communication between Nicaragua and the Global Fund so that procedures, such as applying for funding, are easier and less costly (in both time and resources)?
- How can the Global Fund or the CONAPAT address or support changes in the low prioritization of TB in the country?
- How can the participation of multiple actors from both private and public sectors be facilitated or improved?
- Disbursement delays and the Global Fund requirements for reporting were seen as challenges for participants. How can these be addressed?
- If these aren't the most significant challenges Nicaragua faces with the Global Fund, what are? How can they be addressed?
- How can technical or logistical components of the Global Fund be more supportive? What kinds of supports do you need?
- How would you like to see the results of this study presented to you?

2.5.2 Sampling Strategy

Sampling methods for this study were derived from Patton's foundational qualitative methods text (46). Qualitative research seeks information-rich cases that can provide in-depth information about the subject of interest; consequently, sampling methods in qualitative studies are often purposive. This type of sampling is used to find cases which dramatically illustrate a setting and have the potential for a significant impact on the

[9] Please note that the researcher knew all of the participants from previous activities and interactions.

development of knowledge (46). Purposive sampling also allows for the selection of research participants according to pre-determined criteria while facilitating responsiveness to the research process (50). Responsiveness is achieved as the researcher moves back and forth between the data, identifying tentative emerging themes and sampling needs. Data analysis and collection is thus concurrent, with collection continuing until no new information is revealed and repetitive data emerges, that is, saturation is achieved (46, 50). Minimum sample size for qualitative studies is not clearly defined in the literature. There is suggestion that saturation can be anticipated in sample sizes of twelve to twenty data sources (50). This study used purposive sampling of critical cases with pre-defined inclusion criteria. Interviewing continued within each of the three participant groups until saturation was achieved.

This study sought to gain an understanding of the perceptions of several groups of stakeholders involved in providing, organizing, facilitating or receiving care for, or relative to, TB in Nicaragua. To provide the most representative sample possible, the selection criteria included, to the greatest extent possible, variation in gender, age, education and rural/urban status and/or work history. The patterns emerging from this variation are considered, and were observed to be, valuable in capturing the shared dimensions and core experiences of a particular setting (46). The use of this particular sampling method thus contributed to strengthened reliability and validity in study design.

2.5.2.1 Inclusion criteria

The inclusion criteria for this study were developed by defining each of the three groups of study participants: administrators, clinicians and PATB. Administrators were defined as individuals working within the NTP in an administrative position for at least one year, or who sat on the Country Coordinating Mechanism for the Global Fund proposal or implementation process, or who are key stakeholders in TB control for Nicaragua from either the public or private sector. Participants in this group did not have regular, direct interaction with PATB as part of their work-related responsibilities. The second group of participants was comprised of clinicians, defined as health professionals or workers who had direct, regular contact with PATB within the NTP for at least one year. PATB, the final group of participants, was defined as individuals living in Nicaragua and having some interaction, either direct or indirect, with the NTP within the last year. These individuals

were either seeking, receiving, or had received treatment; or, had an immediate family member who was seeking, receiving or had received treatment from the NTP. Where possible, participants were selected based on the principles of maximum variation.

2.5.2.2 Study Sample

Sampling for this study involved three distinct groups of participants for in-depth interviews and the selection of information-rich, multi-disciplinary stakeholders to participate in the focus group activity. Participants represented a diverse range of backgrounds, experiences and demographics. Maximum variation in the sample was upheld to the greatest extent possible given the relatively few human resources involved in the NTP. In most departments, one health professional is responsible for the regional management of the NTP and one or two practitioners are responsible at a municipal level. In order to maintain confidentiality, the departments and municipalities selected for participation in this study have therefore been left unnamed.

Sampling commenced by identifying potential administrative participants. A list of twenty central-level administrative actors was developed and confirmed for accuracy and comprehensiveness with a colleague and mentor from CIES, in accordance with the inclusion criteria and the principles of maximum variation sampling. Potential administrative participants were first invited to participate in the study by either e-mail or letter. A brief introduction of the researcher was provided with reference to any prior communication where appropriate. A concise summary of the study purpose and design was offered. Potential informants were invited to respond by e-mail or phone if they were interested in participating in the study. A follow-up phone call was made to all potential participants to confirm receipt of the invitation, answer questions and personally invite participants to participate. Replies were received from seven potential participants, five of whom agreed to participate in the study and were interviewed.

Clinicians and regional-level administrators were approached during the observation phase of the study for introduction to the researcher and the project during an NTP event attended by all administrators responsible for regional management of the NTP as well as all clinicians responsible for local, clinical-level provision and management of TB services. Participants at this event were invited to express their interest in participation during a scheduled break, upon which they were provided with an invitation to participate and asked

to provide contact information. Six regional-level administrators expressed interest in participating in the study, three of whom were invited to participate based on the selection of departments representing a majority urban population, a mixed rural-urban population, and a majority rural population. Two of these departments were classified as priorities under the GFP. The other non-prioritized department received funding for specific activities covered nationally by the Global Fund and received technical and financial support from the Damian Foundation.

Following the selection of departments for inclusion in the study, two municipalities per department were selected based on the recommendation of (a) the regional administrator for that department; (b) the confirmation of this recommendation with a research colleague at CIES; and (c) the maintenance of balance between urban, rural and mixed populations in each municipality. The clinicians responsible for providing local, clinic-level TB services were contacted by phone or in person during a field visit to offer further information about the study and extend an invitation. Interviews were conducted with all six clinical participants invited to participate from four municipalities in the prioritized departments. Interviews in the non-prioritized department were repeatedly delayed and eventually not possible due to a five-month medical strike and the resultant restriction on access to clinic sites.

Potential participants in the PATB group were approached during a regular visit to the TB clinic, an activity being held through a TB club or based on convenience based on the home-visit schedule of the clinician at a particular location during a time of participant observation. PATB were introduced to the researcher by the clinician, in most cases a nurse, responsible for the program at a particular site and invited into a conversation about the study and its intents. Some participants expressed interest and willingness to participate in an on-the-spot interview while others scheduled a time to return to the clinic. Participants in this group were provided with the researcher's contact information and a detailed explanation of the study. In order to honour the dignity of the participants and in acknowledgement of the low literacy rate among marginalized populations in the Nicaraguan context, written invitations were set out in clear sight during the interview and provided to participants upon request. Six PATB were verbally invited and five PATB participated in interviews.

Table 2.2: Summary of Sample Characteristics by Participant Group

Participant Group	Sex	Age Range	Interview Time, Average	Other Characteristics
Administrators	5 Female 3 Male	1 (20-30) 2 (31-40) 2 (41-50) 2 (>50)	1 hour 17 min. (Range 49 min. – 2 hours 13 min)	Background 3 Nursing; 5 Medicine Experience: Public & Private Sectors 3 public & private; 5 public sector
Clinicians	6 Female 0 Male*	1 (20-30) 3 (31-40) 1 (41-50) 1 (>50)	1 hour 24 min. (Range 1 hour 14 min – 1 hour 32 min)	Background 5 Nursing; 1 Medicine Work Experience: Location 1 Rural/Remote; 2 Urban; 3 Mixed Work Experience: Years with NTP 3 (<5); 1 (5-10); 2 (>10)
PATB	2 Female 3 Male (2 of which were family members)	2 (20-30) 2 (31-40) 1 (>50)	35 min. (Range 20 min[outlier]; 46 min – 59 min)	Location 2 Rural/Remote; 3 Urban Participation in TB Club 4 yes; 1 no Currently Employed 4 yes; 1 no Estimated Earnings <$2 USD/day** 4 yes; 1 no
Total Sample 19	**13 Females 6 Males**	**Average Interview Length 1 hour**		*No male clinicians worked in the TB clinics in the health centres included in this study **Investigator's estimation based on context, participant's comments and observation

Of the individuals invited for an interview in this study, administrative participants were most frequently stakeholders with closer ties to the NTP and PATB participants were all active in TB clubs. All clinical participants invited into the study completed an interview, with the exception of one region in which interviews were not possible due to the five-month medical strike[10]. The participants in this study represent a broad cross-section of those connected to the case and satisfied the intent to establish maximum variation in sampling. A summary of participant characteristics is provided in Table 2.2 above.

[10] The medical strike was an attempt to pressure the government to raise physician salaries, which, in Nicaragua, are the lowest among all physicians in Latin America. Media coverage of the strike was extensive. During the five months, public services slowed to a standstill as most health centres across the country closed their doors, offering emergency services only. The NTP continued to function during the strike, though some centres moved from daily DOTS to weekly supervision.

The focus group activity was intended to provide in-depth data in response to questions emerging from the interview process. As such, information-rich cases offering a diverse range of perspectives, disciplines and organizational interests were selected by inviting all members of the CONAPAT to participate. A total of ten individuals were invited to the activity, three of whom attended. Two additional participants expressed interest in participating, but withdrew from the activity on its scheduled day. Both of these participants declined due to responsibilities related to an external evaluation being conducted by Global Fund representatives in the same week as the activity was scheduled. Opportunistic participation observation in the two additional group activities with *brigadistas* and PATB involved 10 and 25 participants respectively. These activities became integral components of the participant observation involved in the study design; however, participants were selected based solely on their presence during an event attended by the researcher. Participants in these groups represented a broad range of backgrounds and ages, were attended by both men and women and involved individuals living in both rural/remote and urban locations.

2.5.3 Reliability and Validity

Addressing reliability and validity in qualitative research demands flexibility from the researcher in response to emerging data. Guba states that the trustworthiness of qualitative research is assessed through the truth-value, applicability, consistency and neutrality of a study (51). Truth-value parallels internal validity (in quantitative studies) and refers to the credibility and verisimilitude between the phenomenon of interest and the representation of that phenomenon (51). Guba suggests that studies can enhance credibility by developing designs that include prolonged engagement with the study setting, persistent observation, consistent peer debriefing, triangulation, the use of recording devices, and member checks. Applicability, or transferability, parallels external validity (in quantitative studies). Transferability in this study could contribute to its usefulness for policy makers and clinicians. Transferability may occur in a qualitative study if two similar contexts exist (51) and when practitioners in other contexts decide that the study findings fit with their own experiences (52). The strategies offered to enhance transferability include the use of appropriate sampling methods and seeking thick, descriptive data (51). Additionally, the use

of a case study approach clearly frames the context with boundaries that could be used to assist in making comparison to other cases.

The reliability of a qualitative study is achieved through consistency and capacity of the study's findings in reflecting true variances rather than variances attributable to methodology (51). Conducting several interviews with the same theme and establishing an audit trail of all research documentation can facilitate reliability. Neutrality, or objectivity, in qualitative research acknowledges the existence of multiple constructions of reality and the participation of the researcher as an instrument in the research process (51). "The burden of neutrality is shifted from the investigator to the data, requiring evidence not of the certifiability of the investigator or his/her methods, but of the confirmability of the data produced" (51)(p. 81). Neutrality can be addressed through consistent triangulation of data, practicing reflexivity, acknowledging the researcher's own perspectives and beliefs about the phenomenon, and maintaining a complete audit trail (51). The strategies built into the study design to meet these criteria are presented in Table 2.3 below.

Table 2.3: Quality and Rigor in Study Design[11]

Quality	Suggested Strategies	Strategies Employed
Credibility	Prolonged engagement	Six months fieldwork
	Persistent observation	Two months focused observation followed by ongoing observation
	Consistent peer debriefing	Fortnightly submission of notes and updates to thesis supervisors
	Triangulation	Transcription of Interviews Use of field notes Journaling post-interview
	Recording devices	Use of digital recording device
	Member Checks	Use of restating and contrast questions
Transferability	Appropriate sampling methods	Maximum variation sampling across three groups of participants
	Seeking thick, descriptive data	In-depth comprehensive interviews Focus group expanding on emergent themes
Reliability	Consistency in interview theme	Purpose-statement driven interviews with consistent theme areas (TB control, healthy systems and health rights) Use of interview guides
	Audit trail	Comprehensive documentation of research process
Neutrality	Triangulation	Transcription of Interviews Use of field notes Journaling post-interview Contextual Analysis
	Reflexivity	Cyclical, continuous comparison throughout data collection and analysis
	Bracketing/Awareness of the Researcher's values, beliefs and paradigmatic approach	Continuous reflective journaling Contextualization of the researcher in the study setting
	Audit trail	Comprehensive documentation of research process

[11] Suggested strategies from: Guba EG. Criteria for assessing the trustworthiness of naturalistic inquiries. Educational Communication and Technology Journal 1981;29:75-91.

2.5.4 Rigor and Culturally Competent Scholarship

This study involved the immersion of the researcher in an environment that differs culturally and socially from that most familiar to her. Meleis (53) offers a framework for culturally competent scholarship that has been used for studies engaging groups of cultural diversity, marginalization or vulnerability (54, 55). The framework includes eight criteria against which studies can be evaluated for their cultural competence: awareness of contextuality, study relevance, acknowledgement and awareness of differing communication styles, awareness of identity and power differential, disclosure of researcher's intents and protection of the identity of study participants, reciprocation, empowerment and timing that is sensitive to both the study participants' researcher's needs (53). These criteria were included in the study design to provide an additional layer of rigor in the proposed study, and are detailed in Table 2.4 below.

Table 2.4: Culturally Competent Scholarship[12]

Cultural Competence	Suggested Strategy	Strategies in Proposed Study
Contextuality	Development of understanding of the historical and sociocultural context of the research setting and sensitivity to structural conditions	• Ethnomethodological approach • Prolonged engagement in research setting • Participant observation
Relevance	Ability of research questions to serve a population's issues and interests in improving their lives	• Research questions grounded in literature and local relevance • Responsive, cyclical process of qualitative research • Voice given to populations to allow the expression of their experiences and concerns rather than those of the researcher • Study objectives include knowledge transfer for global health policy formation
Sensitive timing	Demonstration of a time frame that is sensitive and flexible to the meet researchers needs as well as study participants' goals	• Prolonged engagement in research setting • Interviews scheduled according to needs of study participants
Awareness of differing communication styles	Cognizance and acknowledgement of power differentials and commitment to establishing horizontal relationships with shared authority and ownership of data	• Researcher awareness of and respect for culture • Deep immersion in language training and acknowledgement of limitations • Use of critically reflective journaling
Disclosure	Demonstration of establishment trust	• Prolonged engagement in research

[12] Suggested strategies from: Meleis AI. Culturally competent scholarship: Substance and rigor. Advances in Nursing Science 1996;19(2):1-16.

		setting • Submission to ethics • Use of informed consent • Researcher awareness of and respect for culture
Reciprocation	Demonstration of opportunity for all involved parties to meet their own goals through the research process and through the research findings	• Responsive, cyclical process of qualitative research • Voice given to populations to allow the expression of their experiences and concerns rather than those of the researcher • Open-ended interviews allow for flexibility • Flexibility in study design allows for responsiveness to needs of study participants and the NTP • Opportunity for workshops sharing preliminary results for consideration and discussion by study participants
Empowerment	Ability of study participants to demonstrate some connectedness to the research	• Responsive, cyclical process of qualitative research • Voice given to populations to allow the expression of their experiences and concerns rather than those of the researcher • Researcher awareness of and respect for culture • Open-ended interviews allow for opportunity for all study participants to add any additional information they feel is important • Opportunity for workshops sharing preliminary results for consideration and discussion by study participants

2.6 Analysis

Data analysis in qualitative research is a cyclical, continuous process beginning simultaneously with data collection. The systematic examination of data (56) requires responsiveness to emerging patterns and potential themes throughout (46). As gaps or ambiguities became apparent, data collection efforts were responsive in order to provide clarification and depth to the data (46). This analytical, inductive cycle provides a framework from which data can begin to fit together and meaning can emerge within a particular context (56). Ulin, Robinson and Tolley provide a useful framework for the steps involved in the process of analysis, emphasizing the structured and flexible nature of each component (see Figure 2.2). Reading data allows for the development of a deep connection to your data and should occur in stages. Individual sources are considered first, reading for content to identifying emergent themes and assess for quality. Patterns are emergent from the consideration of these sources as sets of data, wherein the researcher considers the possible relationships between themes, contradictory responses or gaps in understanding first in and then outside of the field. As familiarity with the texts develops, coding can be used to assist in identifying, organizing and classifying data (56), always in constant comparison with previous and new sources.

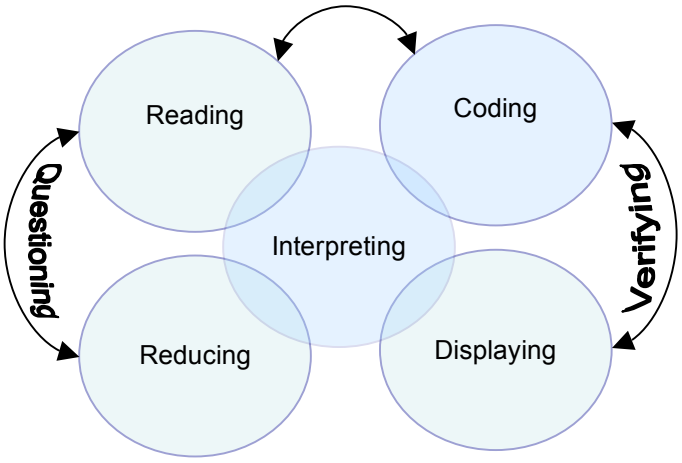

Figure 2.2: Cycle of Qualitative Analysis[13]

[13] From Ulin, Robinson & Tolley (2005).

The process of analysis involved the complete transcription and thorough review of interview data, field notes and journals and the coding of data by hand. Software for data analysis was not used due to a lack of availability in Nicaragua and to allow for deep immersion in data analysis. Emerging data were continuously compared with previous data to provide opportunity for responsiveness. Reflective journaling began upon entry into the field and continued throughout the study period. These journals were periodically reviewed to assess progress and reflect on ways in which the study could be moved forward. Analysis of data provided directly by participants began immediately following the interview or activity they participated in. Interview or activity notes were reviewed and added to for completeness as soon as possible following the interaction. These notes were then typed, providing an immediate second review of the data. While typing these notes, a card was used to jot down any key words, ideas, issues or concerns that seemed to stand out as either (a) important/repeatedly emphasized by the participant or (b) stimulating further question or contributing to gaps needing further exploration. The card was then stapled to the outside of a coded envelope containing the raw notes. As additional interviews were completed, these coded envelopes were kept together with the cards facing out so that they could be quickly and constantly reviewed as more data were collected. As transcripts became available, they were reviewed and compared to the notes and cards.

This process continued throughout interviewing and was found to be quite useful. When saturation was achieved within a particular participant group, the cards were considered as a set of key words or triggers for some of the main emergent themes. The key words for each group were compiled into a list of terms that helped to identify pending questions for further exploration in the focus group. The same process of typing and creating a key-word card was followed after the focus group. The final analysis completed in the field included a review of all field notes to assess for comprehensiveness and completeness. A list of preliminary findings was developed and shared with preceptors from the *Centro de Investigaciones y Estudios de la Salud* (CIES) and the Damian Foundation for verification of contextual appropriateness.

Data coding commenced upon return to Canada. Five main themes drawing from the key areas of interest were identified to provide an organizational framework for coding the data: the Global Fund, Context, TB control, health systems and health rights. Coding trees branching from these main themes were then developed as transcripts were reviewed.

Transcripts were read carefully once and then read again while writing notes in the margins and highlighting any applicable or relevant sections of text. The margin notes were sometimes just one word or phrase and other times were analytical comments or references about how something fit or contrasted from previously coded data. This process was repeated for each of the nineteen interviews.

The electronic organization of data was done by hand. Highlighted and marked transcripts were read a third time, carefully reviewing margin notes and comparing them to preliminary coding trees. Data were copied from the original transcript and pasted into a new document organized by main theme and two levels of sub-themes. The coding trees were revised and added as each transcript was reviewed. These were printed following the organization of data from each of the three participant groups for comparison with the original key-word lists developed while in the field. Ambiguities or discrepancies were clarified by returning to the data, reading field notes, transcripts and margin notes to ensure that the most accurate representation of the data was achieved. The focus group transcript was reviewed as a resource for clarification of issues raised, but not fully explored during the interviews. Following the coding of all interviews, coding trees were assessed for completeness and plausibility.

The coded data, coding trees and all notes made during the coding process were then considered with reference to the research questions. Inductive analysis continued as each research question was contemplated, drawing from source documents to provide context and highlight specific points for exploration. Coded data falling under an appropriate theme and sub-theme were considered as a whole. A comprehensive representation of the understandings and everyday experiences of participants as a window through which the structural boundaries and challenges of the GFP could be understood was developed for each set of research questions. The research questions were explored systematically, highlighting shared, contrasting and illuminating texts from the data to illustrate the main findings in that theme or sub-theme. Translation of selected quotes occurred as they were incorporated into text under a particular question, leaving the data in its original form until the last possible moment. This allowed the data to remain in the voice of participants during the majority of analysis and aligns with the values of empowerment and reciprocation outlined in the strategies for cultural competence outlined above. The process of writing up the results became another stage in the process of analysis.

As results were presented for each research question, findings were summarized and brief analytical statements were made to provide foreshadowing for the more in-depth discussion that followed. When the results were compiled, presented and assessed for comprehensiveness they were again reviewed to ensure the research questions had been addressed and that the textual data representing the findings for a particular question were the most appropriate, representative and succinct available from the coded data. The discussion and final stage of analysis drew from the analytical statements emerging from the presentation of results as a way of highlighting what can be understood about the experience of the Global Fund in the context of TB control in Nicaragua. The discussion placed these experiences back into the analytical framework making links from global policy to local context through various levels of interaction (as presented in the literature review). An audit trail was maintained throughout the analysis process (see Appendix H for key-word lists, preliminary findings, and coding trees).

2.6.1 Issues in Translation

Data collection methods engaging human participants in this study were conducted entirely in Spanish. It was not possible to write fully in Spanish, given the demands of an English-speaking university and the need to communicate with a similarly English-speaking supervisory committee. Two broad challenges were raised by this point: first, six months prior to the field work, the researcher did not speak Spanish; and second, there are historical and contextual issues of power raised by performing research in one language and writing about it in another.

The latter is discussed by Temple and Young as they explore translation dilemmas in qualitative research (57). Their discussion begins by asking if the act of translation needs to be recognized, and if so, at what point. They return prospective researchers to the epistemological foundations of their studies to answer this question. Where quantitative approaches seek objectivity, translating must be considered from the perspective of eliminating bias. According to the authors, in the approach adopted in many qualitative studies, the researcher is acknowledged as a subjective instrument in the research process and language has already been used as a means of creating understanding between researcher and participant. They suggest that though it may seem "researchers who can translate themselves are automatically best situated to do cross language data analysis" (p. 167), the

researcher-translator role is "inextricably bound…to the socio-cultural positioning of the researcher" (p. 168) (57). There are inherent differentials in power that accompany centuries of colonial and post-colonial history behind who I am as an English-speaker from Canada within the Spanish-speaking Nicaraguan context, behind how I fit into this context and behind how I am received, perceived and understood by study participants.

Language and translation must therefore be considered from a critical perspective. There are implicit hierarchies in translation for both individuals and countries involved, particularly where English is commonly used as the measuring stick for meaning (57). The hegemonic nature of English was considered when developing strategies for managing the demands of an English university setting as the premise for research in Spanish. Though the thesis is written in English, all text drawn from raw sources of data were coded and reviewed in Spanish with translation occurring at the moment before text was brought into the results or discussion. I thus worked simultaneously in Spanish and English, and tried to best capture the meaning of text in translating. Because this document is not useful as a way for providing feedback and sharing findings with study participants, it was negotiated in advance that a printed document in Spanish summarizing the study and its findings would be provided to each participant through activities attended and sponsored as part of the finalization of the study.

The former challenge named above was more personal. Acquiring sufficient language skills to conduct this research, with or without a translator, was considered no small task. Despite determination and dedication to learning Spanish, there were many times when it felt as though fluency was an impossible dream. After completing three months of pre-field work immersion in Nicaragua, including intensive language training and homestay, credit was awarded for the completion of the equivalent to the University of Saskatchewan's Spanish 214 (Intermediate Grammar and Conversation). These language skills were built upon by completing an additional three weeks of intensive language classes with immersion and further time in the field observing and conversing with colleagues at CIES. CIES colleagues were consulted on my ability to competently converse and my preparedness to start interviewing. With the consent of a known key-informant, an interview was done to test my capacity without a translator. We spent some time discussing how the informant felt about my interviewing and language skills. With the feedback from the informant, and with successful completion and review of an accurate transcript from the interview, my Spanish

skills were assessed at an appropriate level to conduct study activities without a translator. My language skills developed and continued to be enriched over the remaining four months and I am now fluent.

2.7 Ethical Conduction of Research

This study was submitted to the Behavioural Research Ethics Board at the University of Saskatchewan (BeREB) for approval in September 2005. The consent form was formatted according to the template offered by the BeREB, first prepared in English, and later translated into Spanish and reviewed by the research team at CIES prior to use with any study participant. All BeREB guidelines were followed to ensure the ethical conduction of the proposed research. The researcher made every effort to establish meaningful rapport with all study participants. The researcher was recognized as a visiting student at CIES and received ethics approval from the ad hoc research ethics committee of CIES and the Ministry of Health. This contributed to the credibility of the researcher while in the research setting. For further details of the ethics for this proposal, please refer to the ethics applications and approval certificates (Appendix A).

Chapter 3 Contextual Dimensions—Results from contextual analysis

This chapter describes and analyzes important elements of the research context by examining a diverse body of literature relevant to the analytical framework guiding this study. This chapter enters into a deep level of detail that is foundational to the discussion that follows in Chapter 5[14]. Headings for this chapter incorporate components of the analytical framework to indicate what aspect or level of the framework is being considered in a particular section. The chapter first explores the overarching contexts of globalization and its relationship to changing demands in global infectious disease control, highlighting the need for greater resources in countries facing high burdens of disease. Next, the establishment of the Millennium Development Goals (MDGs) is discussed, followed by an examination of underlying changes in global policy for health and financial aid, and the establishment, policies and structure of the Global Fund. Tuberculosis (TB) is then examined from a population health perspective and global policies for TB control are presented. The historical, contextual and political contexts of Nicaragua follow. A concluding summary describes how this study fits and fills a gap in the existing literature pertinent to global efforts to reduce the prevalence of diseases such as TB.

3.1 Pre-existing Endowments: Globalization, infectious disease, targets and goals

3.1.1 Threatening Global Security with a Cough: Globalization and policy for infectious diseases

The pluralism of global policy actors arising from the processes of globalization has contributed to greater cooperation and collaboration between states and private sectors with respect to preventing, treating and otherwise slowing the spread of serious infectious diseases. The pressure to respond to global security threats ascribed to infectious disease and increasing population mobility has lead to a plethora of policy initiatives related to move increased aid funds from high- to low-income countries (58). Many of these aid

[14] Please refer to the analytical framework in Chapter 1, p.16.

systems have taken the form of global public-private partnerships (59, 60) (See Box 1). Policies addressing infectious disease have traditionally been built around goals of achieving disease eradication and health indices improvement (61). In the 1970's, an increased awareness of the social complexity of infectious disease arose from the collaborative advocacy efforts of the World Health Organization (WHO), community organizers and local populations for improved infrastructure and basic resources, such as sanitation and safe water, in addition to disease-specific programs if efforts to control infectious disease were to be successful (61). This shift offered opportunities for population health approaches to guide infectious disease priorities. With the processes of globalization, in particular increasing population mobility, combined with more recent events, including 9/11[15], this potential has been undermined as infectious disease has been increasingly considered a threat to global health and security (62, 63). Acute awareness of the threat to global health has facilitated the consideration of infectious disease control, and the resources allocated to it, global public goods.

Box 1: Examples of global public-private partnerships and related websites

- Global Alliance for Vaccines and Immunization (www.vaccinealliance.org)
- Stop TB (www.stoptb.org)
- Roll Back Malaria (www.RBM.who.int)
- International Partnership for AIDS in Africa (www.unaids.org/africapartnership)
- European Malaria Vaccine Initiative (www.emvi.org)
- Multilateral Initiative for Malaria (www.nih.gov/fic)
- European Commission Accelerated Action (www.europa.eu.int/comm/development)
- International AIDS Vaccine Initiative (www.iavi.org)

Public goods are those that all people, without risk of limiting the enjoyment of others, can enjoy their benefits. Applying this definition to infectious disease policy is appropriate because the control of infectious disease can have benefits for the population as an aggregate whole, whether or not an individual is targeted. (64). This approach to infectious disease is a driving force behind much of the policies and global goals aimed at health through the reduction of incidence and prevalence of infectious diseases such as TB. Global financing mechanisms for infectious disease use this approach, which provides less flexibility for policy makers to respond to and support investments in policy actions based on research of non-medical determinants of health (65). Although global public good approaches to health target

[15] Referring to the terrorist-related events of September 11, 2001 in the United States of America

populations, they risk considering populations as aggregates of individuals and may not sufficiently address broader determinants of health.

3.1.2 Measurable Targets for Health: The Millennium Development Goals

The MDGs were adopted by the United Nations' (UN) General Assembly in September of 2000 as measurable, time-bound goals and targets for "…combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women" (66). These goals are considered "…a framework for the entire UN system to work coherently together towards a common end…" through a global plan in which "…sustained political and economic reform by developing countries will be matched by direct support from the developed world in the form of aid, trade, debt relief and investment" (66). The UN Development Group acts as coordinator of the MDG campaign through five key dimensions: practical assistance in support of country priorities, country-level monitoring, global monitoring, research, and advocacy. The MDGs provide clear goals and objectives with practical tools for achievement.

The MDGs reflect a global acknowledgement of the health impacts of poverty and globalization as well as a commitment to the global value of human rights. The Millennium Declaration asserts that the central challenge facing the UN today is ensuring that globalization becomes a positive force for all of the world's people (67). Fundamental values of freedom, equality, solidarity, tolerance, shared responsibility and respect for nature as essential to international relations are identified. Peace, security and disarmament, development and poverty eradication, environmental protection, human rights, democracy and good governance, protection of the vulnerable, meeting the needs of Africa, and strengthening the UN are highlighted as specific themes for global development in this century (67). There are eight specific MDGs, with clear targets and indicators, among which are listed targets in TB control (See Appendix H).

There is a growing body of literature related to the MDGs, their achievement and challenges. Much of the literature available can be found in the form of editorials, commentaries and critiques. There is growing concern that the MDGs will not be met in many countries due to lack of access to technical expertise, ongoing conflict and, perhaps most importantly, inadequate political and economic commitment (68). According to the 2003 Human Development Report, only the goals of halving poverty and halving the

proportion of people without access to safe water will be met if global progress continues at the same pace as the 1990s (69). These achievements are expected largely due to the progress of China and India. The WHO Commission on Macroeconomics and Health states that despite increased targeted funds through international financing facilities such as the Global Fund, the sums are far from adequate for achieving health-related MDGs (70). There is question, however, about whether increase in funding would be sufficient for the realization of the MDGs given the lack of capacity and infrastructure for effective absorption many recipient countries face (68). Though targets for TB are anticipated to be met outside of Africa and eastern Europe (71), capacity building at every level of health care, though not an explicit MDG, has been identified as an essential focus for MDG-related initiatives aimed at long-term sustainability (72, 73). In the first five years since the Millennium Declaration, the achievement of the MDGs appears far more elusive than anticipated. In the wake of this uncertainty, policy-makers and political leaders are faced with intense pressure to produce favourable numbers.

Concrete targets presented in the MDGs are appealing, purportedly measurable outcomes for actors in the global policy arena. The inclusion of measurable indicators offers structure in which quantifiable feedback can be provided on an annual basis. Though tracking changes and progress under such a framework appear to be well-prescribed, indicator validity and reliability have been drawn into question. Attaran argues the built-in benchmarks of the MDGs are dependent upon unreliable, inconsistent sources of data that may or may not reflect actual trends (74). He states "…the trends that the health goals allude to are either immeasurable or were not measured properly from the 1990 baseline year onward…" (p. 959) and calls for movement toward feasible measurement by amending the goals, targets and/or indicators themselves. Despite concreteness in the MDG framework, outputs may be more reflective of meagre statistics than actual changes. Regardless of the criticisms around the MDGs, it remains clear that they have become a gold standard around which global health policy attention is focused.

3.1.3 Primary Health Care: Towards global goals for health

Before considering global perspectives and programming for TB control, it is helpful to first reflect on the development and changes in primary health care (PHC) in recent history. Health services have repeatedly been the subject of policy changes and

reforms in the decades following World War II. The health care systems of many so-called lower-middle income countries (LMIC) in the 1950s and 1960s were often continuations of colonial health care models shadowing the needs, technology and expense of services common in industrialized countries (75). Governments often loosely maintained the previously established systems and infrastructure, with accessibility largely limited to the wealthy. During this period, efforts in international public health and development tended to focus on the control and eradication of specific diseases affecting the poor. Programs developed to achieve this were vertical in two ways: each program functioned independently and autonomously from any health system; and each program was targeted at one particular disease.

By the 1970s, the limitations of these short-term, vertical projects and programs became increasingly clear as costs grew and improvements in health outcomes continued to fail (75, 76). The successes of some programs were overshadowed by the continued burden of infectious and preventable diseases experienced in LMIC. Health indicators increasingly demonstrated that as one disease became controlled or eliminated, populations remained susceptible to, and affected by, other preventable infectious diseases (75, 77). As recognition for the contribution of non-biological determinants of health grew, efforts began to shift towards more integrated, comprehensive social services for health. This search for comprehensiveness approaches culminated in the world conference on Primary Health Care in 1978 at Alma Ata, Russia (75), where international leaders adopted a new global objective for health.

The momentum of Alma Ata was accompanied by the optimism of growing socialist movements, the recognition of the need for more effective health systems and their consequent restructuring in a number of countries searching for feasible ways to provide equitable health services to and improve the general health of their populations (75, 76, 78). The increasing weight of coping with the redundancies and limitations of various vertical, autonomous programs amongst underlying health problems for which no services were available was acknowledged in Southeast Asia in the early 1950s (78). This acknowledgement became a global policy trend towards integrated health services in the early 1970s. The envisioned health services would provide a basic, affordable system through which the needs of any country's population could be served.

The vision of PHC of the late 1970's was of a broad social goal to improve health and access to health services worldwide. The 1978 Alma Ata Declaration states that PHC includes eight elements to fulfill the goal of health for all: education around common health problems and their control and prevention; promotion of nutrition and food security; access to safe water and sanitation; maternal and child health care and family planning; immunization against major infectious disease; prevention and control of locally endemic diseases; provision of essential drugs; and appropriate and accessible access to services for common diseases and injuries (79). The goals of PHC were thus comprehensive, acknowledging the importance of social and structural determinants of health in shaping the well being of a population.

This comprehensive, grassroots approach to health care represented a social vision for global health; however, its efficacy and cost-efficiency quickly became a topic of debate amongst health systems analysts and international aid and development agencies. An influential, alternative vision of PHC was published by Walsh and Warren one year following Alma Ata (80). Their alternative strategy, selective primary health care (SPHC), was suggested as an interim, feasible approach to coping with the infectious diseases that "…tend to flourish at the poverty level…", serving as an indicator of the "…vast state of collective ill health…" (p. 145) in LMIC (80). The authors argue that, though "…the goal set at Alma Ata is above reproach…" (p. 145), it is too broad and comprehensive to be realized and, as such, is more rhetorical than realistic.

The authors outline a series of cost-effectiveness analyses based on the indicators of prevalence, morbidity, risk of mortality and feasibility of control to support the argument that a select number of cost-effective services for select health problems and core preventive care would more realistically serve the immediate and severe health problems that affect populations in LMIC. They conclude that "…until comprehensive primary health care can be made available to all, services targeted to the few most important diseases may be the most effective means of improving the health of the greatest number of people…" (p. 152) (80). The proposed package of SPHC strategies limited feasible and essential services in PHC to immunizations, oral re-hydration, breast-feeding and the use of anti-malarial drugs (81). This influential paper sparked a heated debate between those in favour of SPHC and those supporting the original vision of comprehensive PHC.

The responses to the proposal of SPHC can be found in a number of *Social Science and Medicine* publications from the 1980s and early 1990s[16]. The arguments in favour of comprehensive PHC essentially assert that such an approach seeks to shift socioeconomic status, distribute resources equitably, develop health systems infrastructure and offer accessible basic health services (75). SPHC, in contrast, offers a select number of services for problematic diseases to effectively serve as a health structure in countries with limited resources (75). The concept of SPHC was criticized as being the "…antithesis of PHC…" that "…in no way…share[s] the objectives of PHC…" (p.904), and is a return to the vertical program structure rather than an acknowledgement of the horizontal decentralization that was key to systems structured around PHC (82). SPHC was described as "…a form of health service feudalism which can be destructive…" (p. 906) and that opens doors to professionals and funding institutions searching for quick, easily measurable goals rather than actual change (82). Walsh and Warren's arguments are further criticized as "…a traditional defence of vertical programs…" (p.1050) that threatens PHC (83). Much of the debates surfacing in the years immediately following Alma Ata had little opportunity for evaluative defence. As Structural Adjustment Programs (SAP), and later Poverty Reduction Strategies (PRSP), became popularized conditionalities for LMIC following the debt crisis of the 1980s (84), reduced government spending in social welfare and subsequent restructuring of health systems created inflexible policy spaces and forced the adoption of selective approaches to primary health care in many countries (85-88), including Nicaragua (89, 90).

The debate around SPHC versus comprehensive PHC, however, has continued and resurfaced over the last few years—almost thirty years after Alma Ata, the current debates offer a retrospective evaluation of the strengths and limitations of both. Magnussen, Ehiri and Jolly (75) state, "…some global health analysts argue that comprehensive [PHC] was an experiment that failed; others contend that it was never truly tested…" (p.3). They argue that the improvements in population health indices in Nicaragua, Cuba and Mozambique in the 1980s were the result of the expansion of PHC coverage through political will to meet citizens' basic health needs, community participation and improvements in socioeconomic equity. Cuba's progress with PHC has continued despite the loss of support from the

[16] See, for example, the following Volumes of *Social Science and Medicine*: 16 (10); 22 (10); 23 (6); 27 (1); and especially 26 (9)

collapsed Soviet Union and the ongoing embargo by the United States. The success of Cuba's socialized PHC strategy is reflected in population health indices on par with high-income countries with significantly greater health budgets. According to the authors, the successes of SPHC are overshadowed by its limitations.

Though some global health indicators have improved through SPHC, such as infant mortality and immunization coverage, the leading causes of death in LMIC remain related to diarrhoea and malnutrition. SPHC is criticized for five key shortcomings: selective approaches ignore broader contexts of social justice, equity, and participation, relying on a definition of health as the absence of disease; priorities are donor-driven and thus detract from the grassroots approach of Alma Ata; health targets of individual diseases are used rather than higher baselines for overall health status; the redundancy and overlap of vertical programming for health remain embedded in SPHC; and finally, the emphasis on women and young children neglects other segments of populations (75). These limitations contribute to inequities in health services distribution and accessibility, and may create barriers to health rather than offer opportunities to improve the health and well-being of the populations it is intended to serve.

The debate, therefore, continues—now in the context of the MDGs and the pressure for the global political community to produce palatable outcomes. It is in the context of this debate, of the forces for and against selective and comprehensive PHC and of the pressure to achieve new global targets in health, that the Global Fund was born and that populations affected by TB are attempting to cope with both the disease and its determinants.

3.2 Tuberculosis: A global pandemic and a global response

3.2.1 Pre-existing Endowments: The global context of TB

Tuberculosis affects a significant portion of the global population. The WHO estimated 8.9 million new cases of TB and 1.7 million deaths attributable to TB in 2004 (1), an increase from 2000 for both (2). The global burden of tuberculosis is exacerbated by the HIV pandemic and the emergence of multi-drug resistant TB (MDRTB) (1-6). HIV is described as a driving force behind the growing epidemic of TB in Africa (1). The WHO estimates that 10.7 million people are co-infected with TB and HIV (4), a development that threatens the progress made by TB control programs in some countries (91). Co-infection

with HIV increases risk for development of disease from tuberculosis infection by one hundred fold. Among individuals with AIDS, TB accounts for 11% of all deaths—a rate that will continue to grow as the HIV/AIDS pandemic grows (92).

In addition, the extended duration and cost of treating MDRTB are particularly problematic for LMIC (92). Opportunities to treat MDRTB in LMIC, however, are now possible through new international aid organizations, including the Global Fund (93). The treatment for MDRTB is considered inadequate in many countries due to insufficient laboratory capacity, lack of national policies in management of MDRTB and the potentially large number of MDRTB cases undiagnosed or mistreated outside of publicly administered control programs (1). These challenges must be considered as substantial threats to successful TB control.

The global (reported) costs associated with TB control programs have reached approximately 2 billion USD in 2006, the majority of which are absorbed through external sources of funding in LMIC (1). The combination of MDRTB, co-infection of HIV/AIDS with TB, and the increase in the global burden of TB are considered three pandemics of one disease (3) and have been referred to as a global emergency (94). Targets set for TB under the MDGs are projected to be met by 2015, except for in Africa (due to HIV) and eastern Europe (due to MDRTB) (1). The pandemic of this disease is further complicated by the vicious cycle of poverty and disease associated with TB and changes in private sector growth around the world.

3.2.2 A Population Health Perspective of TB

There is a substantial body of literature illustrating the connections between the population health determinants of poverty, socioeconomic status and health. The relationship is bidirectional: being healthy contributes to one's capacity to escape poverty and being sick can generate costs that force one into poverty (95, 96). TB is a classic example of this cycle, and has been referred to as a barometer of social welfare (97) whereby the "basic requirements for controlling TB are the well-being of the population, good economics, the availability of antibiotics, effective diagnosis, stable infrastructure and multidisciplinary health-care professionals" (98) (p. S28). The burden of disease falls heaviest on the most impoverished populations and is associated with environments

conducive to immunosuppression, such as those with high rates of HIV/AIDS, malnutrition and poverty (98-101). TB is thus a disease with a double-edged burden.

The population health determinants of TB are well documented. A multidisciplinary, comprehensive review of literature and data sources conducted out of the Liverpool School of Tropical Medicine identified poverty and nutrition status as key socioeconomic factors contributing to vulnerability to HIV/AIDS, TB and malaria at both the household and community levels (101). The review found the association between poverty and TB is "well established and widespread at national and regional levels" (p. 271) and that poverty is associated with severe disease and death due to TB through its effect on access to health care and capacity for treatment adherence (101). Overcrowding and poor ventilation as well as malnutrition also contribute to environments conducive to TB—conditions which are commonly found among impoverished populations (101). Research and reviews exploring the relationship between TB and socioeconomic status illustrate this cycle.

The award-winning research by Kamolrantakul et al. involved a cross-sectional survey followed by multi-level data analysis conducted in Thailand. The study showed that the "economic consequences of tuberculosis can be devastating" (p. 599), and that out-of-pocket expenditures for diagnosis and treatment of TB amount to greater than 15% of annual income among households below the poverty line (102). The study shows that poverty contributed to greater financial burden in the context of incomes that were additionally reduced by the illness. Additionally, more than 15% of the 'absolutely poor' were found to have sold property or take out high-interest rate loans to cover the costs of TB diagnosis and treatment. The authors conclude that "tuberculosis occupies a special place among infectious diseases due to its chronic nature and particular affliction among the lower socio-economic classes" (p. 600) and call for interventions that go beyond the scope of medical services if efforts to address TB are to be successful.

3.2.3 Intermediary Global Public Goods: Global policy for TB control

Global attention on policy for tuberculosis control changed drastically in the early 1990's following the publication of a series of key documents. In 1988, Styblo emphasized the need for intensive TB control measures in LMIC and called for wide-spread implementation of this highly effective and cost-efficient strategy (103). The classic 1991

paper by Kochi "depicted the devastating impact of tuberculosis around the world in such a clear and forceful manner that it changed the public health focus of the WHO, national governments, and leading voluntary organizations" (104) (p.69). Kochi drew attention to the failure of existing approaches to TB control by highlighting the tremendous social and economic impacts of TB, particularly in LMIC or those with high rates of HIV/AIDS. The paper called for a new strategy for TB control, with a focus on the need for greater monitoring systems and more comprehensive TB services coverage as well as global targets of 85% cure rate for all sputum-positive patients and 70% case detection by the year 2000 (105).

The publication of the 1993 World Bank World Development Report (7), which focused entirely on 'investment in health', confirmed previous support for standardized national TB control strategies as necessary and highly cost-effective (106). This provided further incentive for adopting a new strategy for global TB control with its support of short-course chemotherapy as a highly cost-effective strategy and a component of recommendations for essential clinical services. The marketing of the new strategy, coined as DOTS, by the WHO following these reports resulted in its consideration as a viable intervention with measurable outcomes around which support for tuberculosis control could be rallied (107). Since the WHO's adoption of DOTS as global policy for TB control, much research has been conducted on the strategy's cost-effectiveness (108-110), strengths, challenges and limitations, more of which is discussed later.

The WHO declared TB a global emergency in 1993 and has since promoted the adoption of DOTS as the global standard in TB control, particularly in high-burden countries (111). Despite proven efficacy in clinical trials and field studies, short-course chemotherapy therapy had, until this point, failed to achieve targets for 85% cure rates in LMIC. This was attributed to failures in ensuring adherence to prescribed treatment regimes that in turn contributed to enhanced TB transmission and the development of MDRTB (8). Short-course chemotherapy has, however, shown success in LMIC when combined with a control program in which drug administration was supervised and sputum microscopy facilities were available (8). Additionally, strong public health systems are considered to be key components of successful TB control at both national and global levels (112).

The WHO support for DOTS was accompanied by a document offering guidelines for national programs in which standardization of short-course chemotherapy was described in detail, including recommendations for prioritizing and treating different case definitions. The document also details processes for monitoring and reporting treatment response, monitoring and managing potential drug toxicity cases, addresses patient adherence issues and HIV-TB co-infection, discusses drug costs and quality assurance and provides information for each of the recommended drugs. A cure rate of 85% and level of acquired drug resistance are listed as measurable outcomes for program success (8). The document is a concise and useful resource that would serve as a quick, portable reference for the development and maintenance of national TB programs.

The strategy proposed by the WHO in the early 1990's engaged TB control through a series of coordinated technical, logistical, and political approaches. The DOTS strategy is thus a combination of sound technology and management practices for widespread use through existing primary health care network (111). The strategy involves five core activities: access to quality-assured TB sputum microscopy, standard short-course chemotherapy to all confirmed cases of TB, uninterrupted supply of quality-assured drugs, recording and reporting of each patient and overall program performance, and sustained political commitment (113). Case finding is passive, meaning that patients must present themselves to the health service for assessment and diagnostic testing (111). The core activities can be considered as components of the coordinated technical, logistical and political approaches to TB control included in DOTS.

To provide a greater understanding of DOTS, it is useful to understand what is involved in each these three aspects of TB control under this strategy. Technical aspects of DOTS include case detection and diagnosis through the use of sputum smear microscopy to identify individuals with pulmonary TB. This is used in combination with patient history and clinical exam to obtain a diagnosis of TB. Once diagnosed, all confirmed TB patients are registered and treated. During the first two months of short-course chemotherapy, TB patients are directly observed when taking their medication to ensure that the drugs are taken in the right combinations and for the appropriate duration. Responsibility of treatment adherence is thus shared between health care workers, public health officials, governments and communities. The recording and reporting system is used to systematically evaluate both patient and program progress and outcomes. This system

includes the use of laboratory and district TB registries and a patient treatment card. Logistical aspects of DOTS include ensuring a secure drug supply with maintained stocks and establishing a network of smear microscopy laboratories with regular quality control. Supervision and training is another important aspect of this aspect of DOTS, and includes training for primary health care workers as well as for district TB coordinators. Operational considerations, such as health sector reform (through the strengthening of district-level decision making and improving efficiency and cost-effectiveness of service delivery) and addressing the challenges of co-infection with HIV/AIDS and providing care in rural and remote areas are addressed through the logistics of DOTS. Finally, political aspects of DOTS involve obtaining government commitment to sustained TB control and are the critical factor in ensuring that the other aspects of DOTS are achieved. Political commitment requires governments to make TB control a priority and a core activity in their primary health care networks through direct policy for resource mobilization (111). The DOTS strategy is clearly an integrated, vertical approach to TB control.

3.2.4 Preventing TB

Much of the literature available on TB prevention in LMIC is focused on the Bacillus Calmette Guerin (BCG) vaccine. The current WHO guidelines recommend a single dose of BCG vaccine as soon as possible after birth in populations at high risk for infection (114). The use of this vaccine as an effective preventive measure has been controversial (115), though a series of case-control studies conducted between 1993 and 2003 in India show moderate effectiveness of BCG vaccine against TB with greater efficacy against extra-pulmonary TB in children. A review of the available research states that "BCG vaccination of infants must continue since TB is uncontrolled and since BCG is the only available intervention to reduce the risk of primary infection progressing to disease at distant sites such as meningitis, military, bone TB and scrofula" (p. 71) (115). Meta-analysis of the literature relevant to BCG vaccine from 14 prospective trials and 12 case-control studies of BCG efficacy indicate that the vaccine reduces risk of tuberculosis by 50% (116). Given the global burden of disease for TB, the literature justifies the WHO support of BCG vaccine as a component of the recommended standard vaccination program for high-risk areas. This preventive strategy alone, however, is a preventive strategy for children only and does not address the well-illustrated connections between poverty and TB; yet, there is

little research or literature exploring the elimination of poverty as a preventive measure for TB.

3.2.5 Population Health Research in TB

There are is a small body of literature that considers TB from a population health perspective from which useful insights and understanding of the impacts, challenges and strengths of DOTS can be found. Khatri and Frieden reflect on the successes and challenges of pilot implementation of DOTS in India, highlighting issues affecting the potential success of DOTS (117). Identified challenges related to effective program implementation include: health workers' reluctance to administer DOTS to patients in absolute poverty or who are socially marginalized; regional variation in program effectiveness; poor collaboration between public, private and voluntary sectors; a lack of trained health professionals; poor laboratory facilities and resources; and finally, a lack of coordination between the public sector and academic medical institutes. The authors comment that many persons affected by TB (PATB) face challenges in choosing between a large, unregulated private sector of inconsistent quality, are subject to vast disparities in socioeconomic status, and a lack of community involvement and patient-centred care. Finally, the authors draw attention to TB-related challenges in coping with the impact of HIV infection on TB incidence, the spread of MDRTB and the lack of research regarding the impact of DOTS (117). The article touches on broad, structural, social, economic and environmental challenges and illustrates the complex interaction of population health determinants in a country burdened with high poverty rates and a lack of coordinated health infrastructure.

A study was conducted in rural China using sixteen focus group discussions with TB patients, village health workers, and hospital health providers to obtain an in-depth understanding of factors that influence access to TB care and care-seeking behaviour (118). The study found that, though the TB control program improved access to care for smear-positive cases, accessibility remained a concern. Out-of-pocket expenses for diagnosis, poverty, gender differences and advanced age were identified by the focus groups as barriers to accessing TB treatment. The authors suggest that TB care could be more comprehensively promoted through a combination of strategies, including raising income levels among rural populations; expanding the availability of the TB program; providing

national subsidies for smear-negative TB patients; and raising awareness of the general population as to the signs and symptoms of TB (118). This study draws attention to the need for economic and socio-structural determinants of health affecting access to TB services.

The involvement of the private sector in DOTS has been explored as a significant challenge for effective control (85, 119-122). Collins et al. suggest that health sector reforms and the DOTS strategy for TB control share common goals of technical efficiency, equity and quality; but emphasizes the need for capacity-building within the policy process to ensure that health reforms respond optimally to contextual needs (123). They state that an inclusive policy process that facilitates dialogue between multiple policy actors could develop such a capacity and draw attention to the multiple health determinants that contribute to TB, including epidemiological and demographic factors, social, political ideological, economic, resource, and international factors. The authors argue for collaborative mechanisms between policy actors, as individuals, groups and agencies involved in TB control policy, through stakeholder analysis and political mapping of the interactions between groups in the policy making process (123). Their argument offers opportunity for the DOTS strategy to become actively engaged in political debate and policy formation that would address a broad range of factors that contribute to both vulnerability to disease and TB. Their suggestions implicitly parallel a population health approach to policy through the engagement of multi-level policy actors and researchers in the development of relevant, evidence based policies to address socio-structural determinants of health.

There is some research examining innovative enhancements to existing TB control programs. A study conducted in rural Ethiopia explored the use of a no-to-low cost add-on TB clubs program using both quantitative and qualitative methods (124). The study compared two similar districts in Ethiopia, one of which introduced TB clubs in an attempt to understand how such a social support group might improve treatment compliance and influence societal changes in attitudes towards TB. Clubs were established with three to ten PATB who chose a leader from among the group. The club leader ensured that all members attended the TB clinic on appointment days and informed clinic workers of absent members and met weekly to allow members to share information and experiences. The authors conclude that helped to change social norms of secrecy and shame, allowing

patients to talk more openly about heir experience with TB. This study illustrates how mixed methods and a population health perspective can serve to develop an in-depth understanding of innovative changes to an existing program for TB control that can serve to address broader determinants of health and disease.

Social aspects of TB have been explored in a handful of qualitative studies (125-128). Dimensions and effects of the social stigma of TB in Nicaragua were investigated to provide a foundational framework for directing health services in ways that can reduce stigma associated with TB (129). The study explored common generalizations made about TB, drawing from previous research by the same group that showed that almost half of registered TB patients experienced difficulties in their work environments and identified the fear of being labelled as a TB patient as a common disincentive for seeking treatment. The study involved five remote or rural municipalities in eastern Nicaragua that shared characteristics of poverty, low geographic accessibility, and in two cases, were home to ethnic minorities. Social system analysis centered on PATB was conducted through the duration of their contact with the National Tuberculosis Control Program (NTP). Participants included community members not affected by TB, families and friends of PATB, and health personnel working with or outside of the NTP in 77 interviews and four focus groups (129).

The study found that PATB's responses to stigma included feelings of sadness, depression and loss of confidence as well as fear of being ostracized and socially excluded. These feelings were linked to two sets of determinants: channels of information and power relationships between health care provider and health care recipient. The authors state that TB information is poorly circulated among heath personnel at the local level, leading to social isolation of PATB within health care settings and a subsequent misrepresentation of threat from PATB within communities (129). Power relationships are described in terms of domination exerted by health care professionals over PATB because of their low social status and stigma within the health care sector. The tendency for personnel responsible for the program to be nursing aides, rather than more qualified physicians, is offered as a secondary reinforcement of diminished power experience by personnel working for the NTP within the hierarchy existing in the health care sector. The study led to the development of an analytical model to illustrate the influence of context in the reduction of the negative effects of social stigma. The framework calls for an equalization of power and

greater power-sharing between health care personnel and PATB as well as an improvement in the effectiveness and accuracy of knowledge translation in TB. The expansion of basic training and the strengthening of efforts in the psychosocial components of care and the development of support networks for PATB, namely through TB clubs, are proposed as actions for achieving these goals (129). The authors mention the Global Fund as a primary source of financing for acting upon the proposed framework (129). This last study offers insight into the social dimensions of TB and, not unlike the work done in rural Ethiopia, offers a unique example of how population health determinants can be addressed through expansion of DOTS activities.

These five studies represent research exploring aspects of population health from within existing DOTS programs and highlight the need for further research into how the DOTS strategy can overcome such challenges. Collins et al.'s discussion demonstrates how the strategy parallels policy formation for changing health systems and encourages the involvement of multi-disciplinary policy actors in the consideration of TB to better address broad determinants of health. The literature demonstrates the multi-faceted dimensions of the socio-structural, economic and environmental determinants of health influencing the context of TB around the world and suggests that cross-sectoral activities for addressing TB will be more effective in the long-term than approaches focusing primarily on biomedical aspects of control. When resources are limited, however, it may be difficult to prioritize between short-term control and prevention strategies with longer term social outcomes (123). The Global Fund offers opportunities for creativity and expansion of innovative enhancements to the DOTS strategy, such as those presented above.

3.3 Intersecting Political Systems/Processes and Macro-economic Policies: Global policy in financial aid for health

3.3.1 Evolving Policy in a Globalized World

Foreign investment in health represents an arena of global health policy involving multiple actors and influenced by multiple contexts. Aid flows into LMIC have led to rampant proliferation of projects, policies and coordination efforts (130), each with its own health paradigm and agenda. Until the late 1990's, most aid for health in LMIC was project-oriented and typically negotiated between the donor and national authority

facilitating implementation. This framework for aid has been criticized for the tendency of projects to reflect the priorities of donors and the potential to undermine institutional capacity through the draining of resources from the public sector (131) and was accompanied by a tendency for projects to remain in a permanent project state with little to no integration with national, sustainable infrastructure (132). The dominance of short-term projects left recipient countries with partial solutions to critically broad issues.

More recent changes in aid systems for health have moved away from project-oriented approaches to reflect the global shift toward a neoliberal economic paradigm. A study presented by Burnside and Dollar in 1996 concluded that aid alone is insufficient for economic growth in lower-income countries but can be positive for growth in the context of a so-called 'good' policy environment (133). Good governance and likewise, good policy, in the form of neoliberal economic and political restructuring have become increasingly conditional to aid receipt (130). The emergence of sector-wide approaches (SWAps) to aid systems for health served to shift the focus of dialogue between governments and donors from planning and implementing projects to planning and implementing policy and institutional frameworks related to the broader health sector (131). SWAps are long term partnerships between government, civil society and donor agencies that use the development of sectoral policies and strategies, institutional reform and capacity building to improve the quality and accessibility of health care and consequently improve health (134). The World Bank's support for this approach is reflected in the objectives of their 1997 *Health, Nutrition, and Population Sector Strategy* designed to improve the health, nutrition and population outcomes of the poor by enhancing the performance of health care systems and securing sustainable health care financing outside of the public sector (135). This paradigmatic shift in official aid for health must also be considered in the context of globalization-related changes and the adoption of a global public good approach to infectious disease control.

Controlling global security relative to health has increased aid targeted at actual or perceived threats rather than at areas which may have the greatest impact on reducing poverty (58). The argument for disease-specific funding is two-fold: first, infectious disease is a threat to global security and needs to be controlled; and second, the negative effects of infectious disease on populations, including increased inequalities between rich and poor and significant aggregate micro- and macro-economic constraints, are related to the

diminished capacity of individuals to contribute productively to society (136). The neoliberal undertones of this argument reflect the hegemonic definition of health in economic terms, implying that individuals affected by infectious disease are the source of economic growth constraints.

The pressure on recipient countries to conform to neoliberal reforms is additive—both the number and flexibility of potential donors are reduced by coordination between powerful donors with shared political values. Donor power in developing policy for aid systems is narrowly distributed among a handful a handful of institutions. These substantial donors[17] currently support five key elements of a successful aid system, all of which define conditions recipient countries should meet rather than examining the impact of conditionality. Donors are encouraged to support recipient countries who adopt good governance, set priorities according to the MDG framework and establish public-private partnerships while emphasizing the revision of conditionality towards performance-based allocations (58). These essentially reflect a SWAp to aid systems, using MDGs as targeted outcomes against which performance might be rated in the future. There is some evidence to suggest, however, that the targeted outcomes of MDGs have been interpreted narrowly by donors, resulting in focused spending on health care alone rather than on investments that could develop sustainable social services (58). Despite the recognition for the need for reform, neither the SWAp nor the project-based approach to aid systems sufficiently considers the comprehensive impact of their policies on socio-structural and economic determinants of health.

Financing agencies emerging from global public private partnerships, such as the Global Fund, offer new approaches to aid systems for health. The aid framework of the Global Fund is based on principles that were lacking in traditional project-style aid systems and SWAps to aid, such as unconditional funds and recipient-driven programs; however, the approach continues to assume that funding for targeted diseases will contribute to the development of capacity and improvement of existing systems through system-wide effects (137). The majority of approved grants have been targeted at disease-specific programs and are thus less integrative in nature. Targeted programs such as those funded by the GF have been criticized for focusing too exclusively on one health problem without fostering

[17] Donors comprising the bulk of aid grants and loans directed at health include the World Bank, the International Monetary Fund, the European Union and the United Nations System

broader health benefits that may have more prolonged, but longer-term, positive health effects (138). The argument in favour of disease-specific funding offered earlier, however, agrees with the framework approach of the Global Fund and aligns with the predominant neoliberal economic paradigm supporting the consideration of infectious disease control as a global public good.

3.3.2 The Global Fund: Development, structure, processes and policies

3.3.2.1 Official Development Assistance: Development of a new financing instrument for health

The creation of the Global Fund in 2001 as a financing instrument to facilitate the battle against AIDS, tuberculosis and malaria was partly a response to perceived failures to mobilize health-related aid funds expediently (58). The fund developed under the contexts of mounting pressure on the G8 to respond to the HIV/AIDS crisis in Africa (139), concern over the threat of infectious diseases to global security (10, 140), the political agenda of the MDGs as goals for global development and the advocacy efforts of international leaders, including UN Secretary General Kofi Anan (141). The G8 commitment to strengthen partnerships for the MDGs, notably for HIV/AIDS, malaria and TB, was affirmed at the Okinawa G8 Summit in 2000 (142). Within one year, Anan called for the creation of a Global Trust Fund at the HIV Summit in Nigeria. Pledges amounting to $1.5 billion US (USD) by July of the same year reflected the initial support and shared sense of urgency for the creation of the Global Fund. The 2001 Genoa Summit led to the creation of a transitional board to develop a framework for this fund. A secretariat was formed by January 2002 followed almost immediately by a call for proposals in February (141). The first grant dispersals in December of 2002 culminated eighteen months of collaboration from the time of inception through to development of a functioning financial instrument for moving aid for health into countries burdened by HIV/AIDS, TB and malaria.

The Global Fund offers a new approach to how aid delivery is organized and differs from previous aid systems in six key ways: it is recipient driven, creating country-ownership over funded projects; is maintained by a relatively small bureaucracy; is a partnership between governments, civil society, the private sector, other donors and affected communities; is performance-based; and supports transparency and openness (143). It has been the subject of much debate since its inception. The principle of additionality, where

grants approved by the Global Fund are intended to build upon and enhance existing programs and infrastructures, assumes the sufficient existence of both (13). The majority of approved grants have been targeted at disease-specific programs and are thus less integrative in nature (138). The funding of such programs has been criticized for focusing too exclusively on one health problem without fostering broader health benefits that may have more prolonged, but longer-term, positive health effects (138). The Global Fund faces similar challenges that other aid systems have in the past, such as low recipient capacity for coordination, management and health infrastructure; however, has been exceptionally receptive to feedback from recipients and researchers and is open to adapting its policies in response (137). This makes opportune the investigative exploration of the Global Fund as a new approach to aid for health in LMIC.

3.3.2.2 Political Systems and Processes: Global Fund structures and policies

The Global Fund seeks to attract and disburse additional resources to prevent and treat AIDS, TB and malaria (144). The mechanical and logistical functions of the Global Fund are facilitated through the coordination of a number of key structures (See Figure 4). The key structures for governance and operations include a Board, a Secretariat and a Technical Review Panel (TRP). Representatives from donor and recipient governments, NGOs, the private sector and affected communities as well as key international development partners, including the WHO, the Joint United Nations Program on HIV/AIDS, and the World Bank, sit on the Board. The World Bank also serves as trustee for the Global Fund. The secretariat is responsible for daily operations, administration and reporting of the Fund's activities. Eligible proposals are reviewed by a Technical Review Panel of disease-specific and crosscutting health professionals. These structures work together to receive, screen, review and approve proposals prepared and submitted by a Country Coordinating Mechanism (CCM) representative of government, development partners, non-government organizations, communities, faith-based organizations, academic institutions and the private sector in a particular country. Each CCM nominates a Principal Recipient (PR), who is responsible for local grant implementation and on-going evaluation of progress. The Local Fund Agent (LFA) serves to provide independent assessment of the capacity of a nominated PR to administer and be responsible for grant funds as well as to verify the PR's progress updates and annual audit reports (137).

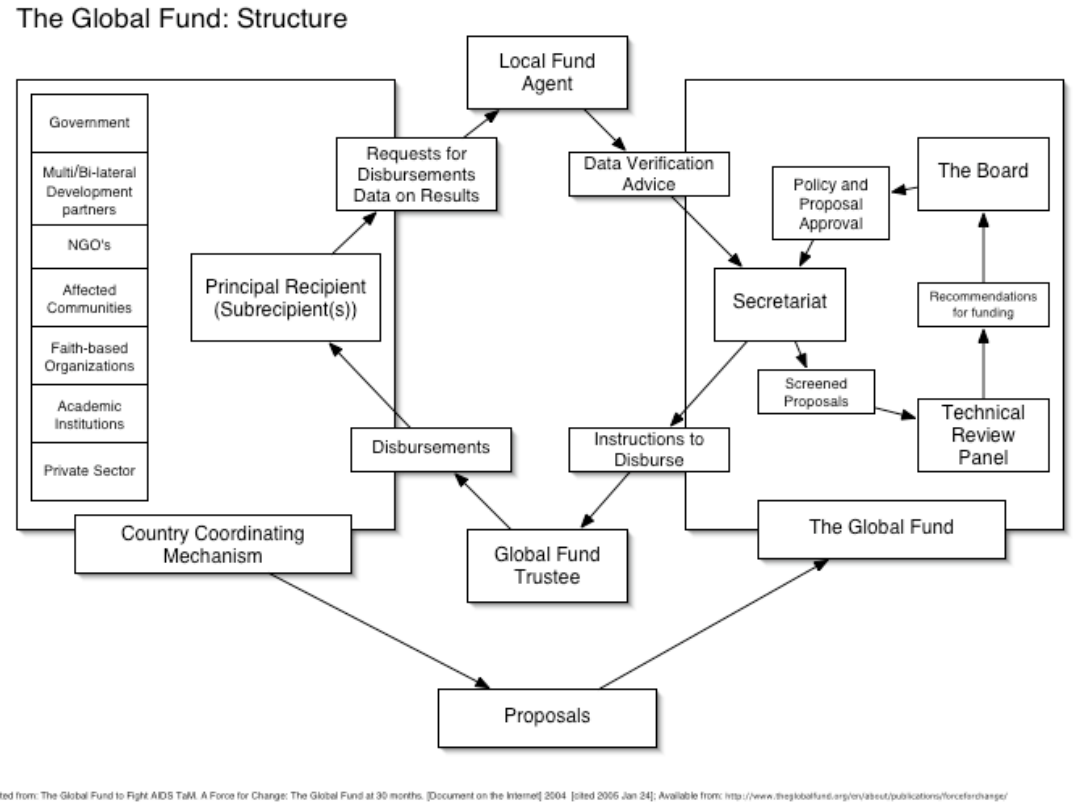

Figure 2.3: Structure of the Global Fund

The progress of the Global Fund can be tracked through their website[18]. The Global Fund has accepted and reviewed proposals for five rounds of funding, the first of which commenced in April of 2002 (145). A sixth call for proposals closed in August 2006. Due to insufficient funding, only a portion of reviewed applications for Round 5 were approved. Through the first five rounds of funding, a total of 5.6 billion USD has been approved and 2.8 billion USD has been disbursed to both public and private recipients in 127 countries. Grant distribution reflects both burden of disease and GF approval policies, with Africa receiving 56% of all funds and Latin America receiving 10%. The bulk of grants focus on HIV/AIDS, at 58%, followed by malaria at 24%, TB at 17% and health systems strengthening at 1%. Under Global Fund grants, there has been an increase of 67% in the number of cases treated under DOTS globally (146).

The grant cycle of the Global Fund mirrors that of an academic grant proposal and approval process. A call for proposals is issued by the Secretariat, to which CCMs respond

[18] See: www.theglobalfund.org/en/about/record/

based on local needs and gaps in financing[19]. Proposals are reviewed and screened by the Secretariat before being forwarded to the TRP for detailed evaluation. The Board is provided a recommendation from the TRP for proposals: fund, fund if clarifications are provided, encouraged to resubmission or do not fund. The Board awards grants based on technical merit and availability of funds. The Secretariat contracts with a LFA to certify administrative capacity of the PR and then enters into a grant agreement with the PR specifying programmatic indicators and milestones to be used to track progress. The trustee, the World Bank, is instructed by the Secretariat to disburse funds to the PR, after which local programs begin. Periodic disbursement requests, providing updates on progress, are submitted to the Secretariat by the PR through the LFA. The PR conducts an annual financial audit and fiscal year progress with the support of the CCM. These data are verified by the LFA. The initial two-year grant commitment may be reviewed twenty months after the initial receipt of funds if the CCM submits a request. Such extension requests are granted based on performance and availability of resources (137). Every two years, a Partnership Forum is held to discuss the effectiveness of policies and practices and to offer a channel for stakeholders not formally represented elsewhere in the Global Fund structure.

3.3.2.3 Global Fund Guidelines and Policies for Proposal Development

This study focuses on five primary Global Fund policy documents[20] outlined in Table 4.2 (p. 94). The granting policies of the Global Fund promote partnered public-private approaches to health services delivery and the enhancement or expansion of existing country-led programs (13). The Framework Document of the Global Fund provides an outline of the purpose, principles and scope of the fund. The document states that the purpose of the Fund is:

> to attract, manage and disburse additional resources through a new public-private partnership that will make a sustainable and significant contribution to the reduction of infections, illness and death, thereby mitigating the impact caused by HIV/AIDS, tuberculosis and malaria in countries in need, and contributing to

[19] Both the Global Fund Framework Document and the Round 2 Call for Proposals are included as source documents examined as part of the contextual analysis performed in this study

[20] Most Global Fund policy documents, grant agreements and progress reports are readily accessible through their website

> poverty reduction as part of the Millennium Development Goals (13).

It is emphasized that the fund acts as a financial instrument for leveraging financial resources rather than an implementing agency for the three diseases. The fund's work is thus based on national ownership, leadership and implementation. An effort is made to acknowledge the desire for balance in terms of coverage that covers prevention, treatment and support across different regions, diseases and interventions. The document also highlights the need for simple, rapid disbursement processes. Table 2.1 outlines the defining characteristics of proposals that could potentially be supported by the Global Fund. In addition to these requirements, further attention is given to the support of strategies that focus on clear and measurable results, technically sound and cost-effective intervention, and programs that contribute to strengthening health systems and creating and promoting partnerships involving government, the private sector and civil society. The purchase of treatment commodities, the support of interventions that address social and gender inequalities, operational research are also highlighted as desirable activities (13). These components essentially comprise the guiding principles for grants approved under the Global Fund.

Guidelines for proposal priority, through a system of weighting and scoring multiple criteria, are also provided in the framework document. Proposals are weighted based upon disease burden, poverty indicators, potential for rapid increase in disease, political commitment, and existence of a CCM. A section is dedicated to detailing monitoring procedures to ensure adequate tracking and measuring of results for sufficient programmatic and financial accountability. Comprehensive assessment plans including monitoring, evaluation and audit are required for every grant proposal. In the case of TB, reports from the NTP including case-detection, treatment, cure and completion rates are acceptable monitoring indices. Financial accountability is assessed based on three key principles: the funds were used for intended purposes; funds were used cost-effectively; and expected results were produced (13). Successful proposals, therefore, are those that best meet the fund's guiding principles and have the greatest assessed need according to the priority or weighted score assigned to a particular application.

Table 3.1: Global Fund Principles for Grant Proposals[21]

The fund will support proposals which:

- Focus on best practices by funding interventions that work and can be scaled up to reach people affected by HIV/AIDS, tuberculosis and malaria
- Strengthen and reflect high-level, sustained political involvement and commitment in making allocations of its resources
- Support the substantial scaling up and increased coverage of proven and effective interventions, which strengthen systems for working: within the health sector; across government departments; and with communities
- Build on, complement, and coordinate with existing regional and national programs in support of national policies, priorities and partnerships, including Poverty Reduction Strategies and sector-wide approaches
- Focus on performance by linking resources to the achievement of clear, measurable and sustainable results
- Focus on the creation, development and expansion of government/private/NGO partnerships
- Strengthen the participation of communities and people, particularly those infected and directly affected by the three diseases, in the development of proposals
- Are consistent with international law and agreements, respect intellectual property rights, and encourage efforts to make quality drugs and products available at the lowest possible prices for those in need
- Give due priority to the most affected countries and communities, and to those countries most at risk
- Aim to eliminate stigmatization of and discrimination against those infected and affected by HIV/AIDS, especially for women, children and vulnerable groups

3.3.2.4 Research & Evaluation of the Global Fund

The Global Fund offers an online resource providing links to research and evaluations conducted both externally and internally[22]. Two large-scale evaluations were initiated almost immediately following the establishment of the Global Fund. A summary of the research on global health partnerships by the British Department for International Development's (DFID) explores the impacts of global health partnerships, including that of the Global Fund (147). The research involved a substantial, evidence-based assessment of the impact of global health partnerships (GHP) to elucidate best practice principles for guiding DFID actions. Though not exclusively focused on the Global Fund, this comprehensive research program offers valuable insights and raises important questions.

[21]Adapted from: The Framework Document of the Global Fund to Fight AIDS, Tuberculosis and Malaria. [cited 2004 Nov 24]; Document on the Internet]. Available from: www.theglobalfund.org/en/files/publicdoc/Framework_uk.pdf

[22] Available at: www.theglobalfund.org/en/links_resources/library/

The group found that, generally, GHP are having a positive impact. Areas of success are identified as increased profile and attention given to neglected diseases, mobilized commitment and accelerated progress of country programs and comprehensive coverage wherein most neglected diseases are being funded by at least one GHP. The success in leveraging funds for neglected diseases has been primarily from traditional donor countries. Country-level operations of GHP were identified as a key concern. Given the emphasis on acceleration of progress towards MDGs, GHP often align with national priorities; however, low-resource countries were found to need financial support for both disease control programs in drug procurement and operational costs as well as technical assistance. The Global Fund depends largely on other partners for technical support, leading to assistance on an ad hoc, urgent basis rather than consistent and controlled. The authors draw attention to the need to address issues of governance, coordination and health systems strengthening. Both national and macroeconomic sustainability are highlighted as areas needing further research and debate (147).

The specific strengths and challenges of the Global Fund are monitored and discussed by the System Wide Effects of the Fund (SWEF) Research Network initiative[23]. The SWEF group explored system-wide effects of the Global Fund through a series of country case-studies, including work in Africa, Asia and, in Latin America, El Salvador, Guatemala and Peru. They provide a conceptual framework to evaluate the multi-level impacts of the Global Fund on broader health systems through an examination of effects on policy environments, public-private mix, human resources and pharmaceuticals and commodities (15). The framework highlights common features of the Global Fund proposal policies, drawing attention to the emphasis placed on the purchasing of drugs and commodities, human resource investment through training, enhancement of private sector role and strengthened referral systems (15). Research building from this framework focuses on case studies to highlight the impact the Global Fund is having outside of targeted programs for AIDS, TB and malaria.

The SWEF case studies frame their research within the context, policy and information needs of three African countries: Benin, Ethiopia and Malawi. The case studies involved baseline document review, multi-level stakeholder interviews and a facility survey with provider interviews, with planning for future follow-up process (16). The authors

[23] SWEF work and progress can be found at: http://www.phrplus.org/swef.php

highlight the interpretation of Global Fund policies as a limitation in exploring Global Fund impacts. Because the Global Fund describes itself as a financial instrument rather than an implementing body, the interplay between Global Fund policy and practices and country-led decisions leads to variable results (16). The study findings showed that the Global Fund has had a range of broad effects on health systems, often revealing and sometimes exacerbating long-standing system weaknesses. In the case studies presented, participants expressed feelings of disempowerment with the Global Fund support received and felt its presence had led to a re-verticalization of services. Despite having country-driven projects, participants felt a lack of ownership and control in decision-making. Concern over insufficient human resources was identified as barriers to effective implementation of country-led Global Fund Projects (GFP). An environment of mistrust and tension between public and private sectors in each of the countries studied was identified as a constraint to private sector collaboration. The authors conclude that, though the Global Fund has not had widespread negative effects on health systems, the extent to which health systems are being strengthened is limited (16).

Another working group, led by Rauiri Brugha at the London School of Hygiene and Tropical Medicine, has undertaken a series of Global Fund studies in Uganda, Mozambique, Zambia and Tanzania (17, 18). The studies "…tracked the views and experiences of governments and other country stakeholders of Global Fund supported programme activity" (p. 3) through the use of semi-structured interviews under a topic guide (17). Some findings echo those of the SWEF group, namely the effect that the presence of the Global Fund has had on highlighting underlying system weaknesses in capacity, communication and coordination. Participants expressed lack of perceived ownership as well. The studies illustrate challenges with proposal development and establishment of a CCM, disbursement delays, and a lack of in-country Global Fund presence as concerns. Feelings of pressure to spend funds quickly were expressed by participants in Uganda (17).

These studies represent large-scale investigations of the Global Fund through both qualitative and quantitative approaches. Context, it seems, plays a significant role in the successes and challenges experienced in different countries; however, there are some issues that are crosscutting. Concerns over sustainability are raised in each of these studies. Technical and logistical functioning of in-country Global Fund structures, such as the CCM, in complex political contexts, is frequently highlighted. Private sector engagement

has been a challenge in each of the countries studied, some with greater success than others. Notably, two of the studies found a lack of perceived ownership in the proposal development and implementation processes. This calls attention to the need for greater reflexivity from the Global Fund and highlights the power that policies created by this funding agency carry in recipient countries.

To date, published studies have not involved Latin American experiences, hence the value of this exploratory study. Nicaragua was chosen for (a) timing, as the grant was approved in Round 2 and phase one was anticipated to end as planned fieldwork would end; (b) relationship between the University of Saskatchewan and appropriate stakeholders in Nicaragua; (c) previous experience of the researcher in Nicaragua; and (d) stakeholder interest in the project.

3.4 Domestic (National) Policy Space and Capacity in the Nicaraguan Context: Political landscape, health care and external aid

3.4.1 Dictatorship, Revolution and Reform: A brief glance at Nicaraguan context and history

Nicaragua has been subject to the pressures and desires of external forces throughout its recent and less recent history. The socio-political context of Nicaragua is poignant, polarized and complicated. Understanding this context is, however, critical to situating experiences explored in this study. It is beyond the scope of this thesis to provide an in-depth, detailed review of contemporary Nicaraguan history[24]; however, it is helpful to review the characteristics and major events of the three moments shaping the Nicaraguan social and political landscape over the last four decades. These three moments can be described as the pre-Sandinista, Sandinista and post-Sandinista periods, each of which is marked by distinct political and economic paradigms and the transitions for which were marked by major socio-political events.

Pre-Sandinista Nicaragua was characterized by growing guerrilla resistance to the long-standing American-supported dictatorship of the Somoza family through grassroots organization and the emergence of a formal, revolutionary party. Popular discontent and

[24] Several books provide insightful and comprehensive summaries of Nicaraguan history. See, for example: Walker T, editor. (1997) Nicaragua Without Illusions. Willmington, DE: Scholarly Resources Inc.; or Walker T. (2003) Nicaragua: Living in the shadow of the eagle. 4th ed. Boulder, Colorado: Westview Press.

the formation of the *Frente Sandinista de la Liberación Nacional* (FSLN) resulted in repeated, loosely-organized clandestine attempts to overthrow the Somoza dictatorship during the late 1960s (148, 149). In 1972, a Christmas day earthquake destroyed much of the country's capitol, Managua, and killed more than 10,000 people. The destruction and chaos created by the earthquake served as an inadvertent catalyst for mass organization and the loss of upper-class support for the dictatorship. The corrupt and incapable Somoza government plundered most of the international relief aid that poured in and promises of reconstruction of houses, roads and sewer systems, with the exception of luxury homes for high-ranking officers in the National Guard[25], were abandoned or grossly mismanaged. In the years following, Somoza developed an international reputation for human rights violations, was denounced by the Catholic Church and had begun to lose American favour (149). By 1977, Somoza supporters were increasingly difficult to find both locally and internationally.

The international reproach of Somoza government was met with growing internal discontent and desire for change. The second turning point marking the transition from dictatorship to revolutionary uprising was sparked by the assassination of Pedro Chamorro, the editor of an influential newspaper, *La Prensa*. After years of censorship and government control, the freedom of the printed press was re-instated under international pressure and concern over waning support of the Carter administration. *La Prensa* began to run controversial stories and detailing the corruption and embezzlement schemes of the Somoza government and highlighting successful guerrilla actions occurring largely in the north of the country. Support for the Somoza government had plummeted. Chamorro was assassinated on January 10, 1978 by assassins presumably paid by Somoza and the enraged country responded with a revolutionary war supported by virtually all major groups and classes (149, 150).

A two-week general strike, launched almost immediately following Chamorro's assassination, marked the start of the Sandinista period. Despite the standstill it created in the capitol, the corrupt National Guard's staunch support for Somoza halted the strike's effectiveness. Two philosophically distinctive streams of grassroots movements, one Marxist-inspired and one Catholic, aligned under a common goal of overthrowing the

[25] The National Guard, notorious for human rights violations and corruption, was a militia created by the United States to provide backup to the Somoza dictatorship. For a detailed overview of its development and collapse, see: National Guard (Nicaragua) on Wikipedia: http://en.wikipedia.org/wiki/Guardia_Nacional_%28Nicaragua%29

dictatorship (149). Under the leadership of the FSLN, revolutionaries resisted the Somoza's National Guard and, after a year of pressure, hostage taking and a series of intense insurrections in July of 1979, successfully forced the exile of Somoza and the dissolution of his army (148, 149). The FSLN led the new government and, through the Board for National Reconstruction, began a process of national reconstruction (148). Though revolutionaries led by FSLN had rallied around a common goal of liberation, once in power a fear of a Soviet-style communist state and the emergence divergent interests destabilized and polarized the tenuous political environment (149) of a fragile post-revolutionary Nicaragua.

Under the leadership of the FSLN, Nicaragua experienced a multitude of progressive changes, particularly relative to health and health systems. The restructuring included efforts to create access to social services, primarily education and health care, to revitalize the devastated economy and to honour individual rights and liberties (148). The construction of a primary health care system, based on the principles of Alma Ata and the goal of achieving 'Health for All' (151), began almost immediately after the FSLN took power (152, 153). Over three hundred community health care centres and four hospitals were built around the country, offering Nicaraguans access to health services, to many, for the first time[26] (152). The progressive changes realized by the FSLN during the years immediately following the revolution were met with significant challenges and opposition during the 1980s.

The FSLN came into power with a strong grassroots base and no organized opposition during the wave of Soviet-supported socialism of the 1960s-70s. Nicaragua's tradition of Catholicism and a Soviet unwillingness to support a Cuban-style reorganization led to the adoption of a pragmatic politic based on four highly consistent tenets: promotion of a mixed economy with strong private sector participation; political pluralism; social programming based on grassroots volunteerism; and maintenance of diplomatic and economic relations with as many countries as possible, regardless of ideology (149). The first year in power was marked by dramatic advances in national reconstruction through the expansion of health and education services and a broad-scale literacy campaign, primarily

[26] The contextual developments and restructuring of Nicaraguan health care systems, including their connection to internally- and externally-imposed structural adjustment are discussed in detail in the following section

through groups of volunteers that had organized around the revolutionary effort (148). In an attempt to preserve economic creditworthiness, foreign debt incurred under the Somoza dictatorship was honoured (149). The concerted efforts of the Sandinistas to rebuild their country based on principles of socialism and economic accountability were, however, met with internal conflict and blatant external attempts at government destabilization.

Growing polarization within the country and the installation of the new Reagan administration in the US created conditions that counteracted much of the progress realized by Nicaragua under the FSLN leadership. Sandinista support for the proletariat was interpreted with fear of communism from privileged classes, many of whom fled the country. Internal political polarization between conservatives and Sandinistas emerged as the Reagan platform denounced what they referred to as a Marxist-Sandinista takeover. Reagan cut off all US aid to Nicaragua and undertook a full-scale process of destabilization (149) including sponsorship and training of a counter-revolutionary army (the *Contras*), covert military and political operations headed by the Central Intelligence Agency, trade embargo and international credit boycott, both internal and external propaganda campaigning and a diplomatic drive to isolate the Sandinista government (154). As these efforts intensified over the 1980s, government attention was diverted to military and economic survival.

The Contra war left a wake of destruction at a time when the country was fighting to stay afloat. The *Contras*, training and attacking from neighbouring Honduras, targeted the foundations of the social campaigns launched by the FSLN by attacking social service infrastructure, major main export crops, such as coffee, and the remote and rural villages that had shown the greatest support for the Sandinistas throughout the revolution project (149, 155). Grassroots organizations continued to rally around and support their government despite the devastating consequences of the war and the continued American efforts to undermine the Sandinistas. After five years of ongoing struggle to maintain power in the face of the *Contras* and intense external economic pressure, the Sandinista project began to suffer more than could be recovered. In an attempt to evade an economic crisis, cope with growing unemployment and inflation and continue to support exorbitant military costs, the government undertook a series of self-imposed neoliberal economic reforms between 1985 and 1988 (149, 155, 156). The economic situation grew increasingly desperate as inflation rose to 33,602 per cent, both the direct and indirect damages of the

US-led destabilization reached 9 billion USD and Nicaragua was ranked the poorest country in the Western Hemisphere (157). Leading up to the 1990 national elections, the electorate was exhausted by war and fearful of a second military draft while struggling to live with the consequences of an economy in crisis.

The 1990 elections marked the latest turning point in contemporary Nicaraguan history and the start of the post-Sandinista period. The FSLN lost the elections to the National Opposition Union under the leadership of the widow of Pedro Chamorro, Violeta Chamorro after intense US pressure threatening continued war and economic sanctions under an FSLN government (148). President Chamorro was ideologically neoliberal and supported by the American government. The economy was shifted from the mixed model used by the Sandinistas to a free-market model (158). The Contra War came to an official end, though re-armed *Contras* and ex-Sandinista military conflict continued sporadically throughout the 1990s (149). Although overt US-led destabilization efforts also ceased, clear incentives were established by USAID funds directed to municipalities that voted the Sandinistas out of power and anti-Sandinista propaganda campaigns have persisted (149). The country's debt and continued economic crisis combined with the lifting of an International Monetary Fund (IMF) boycott led to an IMF/World Bank-sponsored structural adjustment program in 1992 (148). Public investments in social programming were reduced to 1.3 per cent of GDP (158). Though inflation was eventually reduced from 7000 per cent to 3.8 per cent, unemployment grew from 25% in the late 1980s (159) to an estimated 60% in 1992 and investments in health and education were cut dramatically (148). Between 1990 and 1994, the proportion of the population living in extreme poverty grew dramatically as wages decreased by 80% and basic needs, such as water housing, nutrition sanitation services and education, went unmet (160). Continued adjustment and reduced government flexibility in social spending, mass un- and under-employment, devastating natural disasters, corruption and declining health and socio-economic indicators have marked the time since.

Poverty and a growing socio-economic divide accompanied the massive unemployment that affected much of Nicaragua's population in the early 1990s (161). Economic crisis was intensified by drought and subsequent wide-spread malnutrition (148). The country's political polarization deepened and grassroots mobilization began to fade (149). In 1998, the country faced the devastation of Hurricane Mitch, which killed 2400

people and rendered one-fifth of the population homeless (157). Under the corrupt leadership of President Alemán, once again international aid was plundered (162, 163). In 2000, Nicaragua entered into its first Poverty Reduction Strategy and in 2001, Nicaragua became involved in the Heavily-indebted Poor Countries (HPIC)[27] initiative (161, 164) and poverty reduction efforts shifted almost entirely to an neoliberal economic model (161). By the 2001 elections, the majority of the population was living in desperate conditions and the reduction of the state through structural adjustment had restricted government ability to intervene. Grassroots organizations continued to be active in addressing some social concerns, however national leadership lacked the capacity to effectively respond to growing crisis (149). As the November 2006 elections draw near, the country continues to face extreme challenges of poverty, deep political polarization and maintained external anti-Sandinista pressure.

The Nicaraguan context is politically and socially complex. The country has faced extreme political polarization, two recent wars with intensely detrimental psychological and economic impacts, and corruption and abuse of power from both internal and external leaders. Dramatic economic reforms, initiated by the socialist Sandinistas and deepened by the neoliberal governments that followed, led to a reduction in state investment and capacity to control social investments in health and education. The Sandinista support from mobilized grassroots organizations and reliance on volunteerism in addressing social concerns was assumed to be an asset to later governments, despite differing social visions. The combination of repeated breaks of public trust, reliance on volunteers and public burden-bearing under desperate economic conditions, uncontrolled rates of un- and under-employment and the continued inflation of government salaries seems to have created an environment of disenchantment and distrust. This environment is further complicated by the changes and reforms incurred by health care systems over these three periods of the contemporary Nicaraguan context.

[27] For a concise description of the HPIC initiative, see: Gupta S, Clements B, Guin-Sui MT, Leruth L. Debt relief and public health spending in heavily indebted poor countries. Finance & Development 2001;38(3):10-13.

3.4.2 Health care over three political moments in contemporary Nicaragua

Political regimes in Nicaragua have played an integral role in the shaping and developing of national health systems. During the pre-Sandinista period, health care services were inefficient, disorganized and inequitably distributed (150, 165). The health system, under the purported leadership of the Ministry of Health[28], was fragmented and largely unregulated. In the years leading up to the revolution, an estimated 28 percent of the population had access to some form of health care; however, the majority of health resources were consumed by just ten percent of the population (165). Vast regional disparities in resource and service distribution existed between urban and rural areas, where 80 percent of health was provided by *curanderos*[29] (165). Though the Ministry of Health was "…responsible for preventive care throughout the country and curative services in rural areas, controlled only 16 percent of health expenditure—and 75 percent of this was spent in Managua (p. 13) (150). The National Institute for Social Security (INSS) offered private curative services salaried employees, comprising 8.4 percent of the population, with over half of all national health expenditures. This fragmentation of health services was exacerbated by the private hospitals and clinics providing services to the National Guard and their families. Additionally, private insurance groups, NGOs and local health agencies functioned independently (150) from these three fragmented branches.

The state of health in the country during the pre-Sandinista era was marked by low life expectancy and high infant mortality. Most children did not receive immunizations (153) and infant mortality was among the highest in the region (90). Despite variation in reported infant mortality rate, sources show a common, sharply declining trend that started in 1974 and continued through 1980s (166). The main causes for deaths under one year of age were attributable to preventable diarrhoeal diseases, pneumonia, tetanus, measles and whooping cough. "Malnutrition affected more than half of all children," and polio epidemics were common (p. 12) (150). Between 1965 and 1976, Nicaragua recorded an increase of 105 percent in childhood malnutrition (167). The pre-revolution decline of these rates has been attributed to changes in health service initiated by Somoza under the context of growing international attention on primary health care strategies and waning

[28] Established in 1948 (Solis, Ibarra, Torres & Martinez, 2003)
[29] *Curanderos* are traditional folk healers

national and international support for his dictatorship[30] (168). The health status improvements realized during this time reflect the complexity of political influences on population health, particularly given the context of war, revolution and paradigmatic shift that accompanied the continued decline in infant mortality over the late 1970s and through the1980s.

Despite the purported support for health service investment in late 1970s, the National Guard led attacks during the revolution that were directed at health and social sectors perceived as potentially subversive. Health workers, organized in 1974 in the health workers' union (FETSALUD), became a powerful trade union and caught the attention of Somoza through their strong support of the proletarian FSLN. Many health workers, nurses in particular, "left the country because of political harassment or lockouts" (p. 16), were "jailed, murdered or "disappeared"" (p.16) and later in the war, public hospitals were destroyed or damaged by air artillery attacks (150). In support of the revolution, many doctors and nurses abandoned their public or private practice to join the Sandinista movement. Clandestine networks of hospitals and clinics were organized to support and treat casualties of the war. Some health workers lived a "dual life—an official one working in a government hospital or clinic and a secret one treating FSLN guerrillas and their families" (p. 16) (150). The revolution itself resulted in over 40,000 deaths and wide-spread damage to health and sanitation infrastructure (169). Garfield and Williams (150) summarize the impact of continued attacks and the Sandinista response,

> In effect, the National Guard obliged the Sandinistas to create a cadre of dedicated volunteers working in "liberated" communities. By July 1979, when more than four decades of Somoza rule finally came to an end, the Sandinistas had established a makeshift system of widespread community involvement in health care (p. 18).

The PHC approach used by the FSLN in the first years after its victory was a necessity that built on the precedent of community organization and participation achieved

[30] This is reflected in the National Health Plan for 1976-1980, developed by the Ministry of Public Health. Interestingly, the plan reflects the basic primary health care model adopted in 1978 at Alma Ata. From both the literature and personal communication received while in Nicaragua (Gonzalez, G. Personal Communication, Feb 2006), it is clear that the plan was never implemented to its full extent; however, it was used as a foundation for the expansion of health services under the FSLN government and speaks to the extent of the energy, enthusiasm and international pressure surround the concept of comprehensive primary health care in the 1970s. See: Ministerio de Salud Pulbica, Plan de Salud: Periodo 1976-1980. MINSA: Managua (1975).

through the revolutionary process. Limitations in supplies and personnel and a lack of sufficient health structure called for an approach that could be quickly implemented. The model of primary health care outlined in the National Health Plan 1976-1980 and supported by Alma Ata was adopted as a reasonable approach that would meet the needs of a population who had previously had little to no access to health care services while building upon the organized, participatory community networks that had developed during the revolution (150). The fragmented health care system was centralized, though poorly defined and regulated, under a Unified National Health System that brought INSS, among 22 other health institutions existing prior to the revolution (170), under the leadership of a new Ministry of Health (MINSA) (165, 169). Private sector services remained active (165), and were even encouraged by the Sandinista government as providers of supplementary health service (171).

Under the structural changes implemented by the FSLN, contributions from INSS subsidized public spending in health and the proportion of government health investment rose from 7.5 to 12 per cent between 1977 and 1981 (165). Foreign volunteers and private organizations, including Oxfam America, supported health-related activities through providing financial support or medical service throughout the 1980s (165, 172). Volunteer community health workers, *brigadistas*,[31] were trained for several months and sent to rural or isolated areas for a two-year service (152, 165, 170). In 1979, women, children and rural and urban labourers were emphasized as priority populations in the national health policy. Popular health days and campaigns were organized and carried out by volunteers *en masse* to provide communities with vaccinations (150, 169). This may have contributed to the development of a campaign culture, wherein populations were subjected to repeated, short-term health campaigns using propaganda and one-time mass-immunization or mass-education as the foundation for 'health'. Accessibility to health care services increased to an approximate 80 per cent of the population and major gains were achieved in childhood vaccination and nutrition (165). The WHO and UNICEF both provided financial and technical support for the integration and consolidation of a decentralized PHC model emphasizing maternal and child health and community participation (173). International

[31] *Brigadistas* are voluntary health workers that serve as the connection between health posts or health centres and rural, remote and/or small communities.

trends favoured this participatory comprehensive PHC model and Nicaragua gained international attention for its achievements (173).

Efforts to maintain comprehensive PHC with a focus on prevention while providing extensive, fully accessible curative services combined with the damaging effects of war strained the health sector. The government had encouraged the public to expect free health care, but weren't always able to meet demands as infrastructure deteriorated, human resources were scarce and severe supply shortages common (150). In a European tour, president Daniel Ortega successfully rallied financial support from a number of donors (172). Foreign support from *internacionalistas* and NGOs proliferated and became active participants in providing health services throughout the country (150, 172). Despite Sandinista efforts to sustain a focus on health and education, the intensification of warfare combined with growing economic crisis forced budgetary funds to be diverted to security at the cost of social programming (174). Internal structural reforms occurring at this time (as described earlier) compounded the decline in health investment.

The *Contra's* targeting of health and the Sandinista's PHC model drastically changed the health sector capacity and landscape in the 1980s. During the first two years of the contra war, 25 per cent of the country's trained physicians fled the country. Another wave of health worker emigration, including in-country emigration from public to private sectors, further depleted human resources in health between 1983 and 1985 (150, 174). Contra attacks and kidnappings of *brigadistas* led to a dramatic reduction and weakening of the fleet of volunteer health workers that the government had depended on to roll out its PHC strategy. The frozen state of many health activities combined with growing refugee settlements led to outbreaks of infectious diseases, the most widespread of which was malaria. Compounding these factors was the increasing demand for curative and emergency health services to cope with casualties of the war (171, 174). Furthermore, the US-backed low-intensity warfare carried out by the *Contras* created an atmosphere of fear, distrust and insecurity for average people trying to access health services. The pluralistic nature of the primary system, public hospitals and private care centres in Nicaragua contributed to a culture of hospital shopping, where patients would take treatment at several places at the same time for the same illness: what had been envisioned as primary, preventive services became more like a referral system (150). The forced changes in national priorities, environment of embargo and severe lack of resources contributed to a

shift from a comprehensive PHC model towards the model of selective PHC (152) that had gained much international attention after Alma Ata.

The internal structural changes undertaken by the Sandinistas in response to economic crisis and demands on military budgeting were reflected in reduced social spending that were intensified and extended following the 1990 elections. The transitions in leadership and structure within MINSA were challenging, complex and highly polemic on both ends of Nicaragua's polarized political spectrum (150). MINSA was reorganized to a pre-revolutionary, fragmented model and subjected to a number of reforms and restrictions. Not-for-profit private organizations proliferated during this time as leftist donors pulled funds formerly directed at MINSA in favour of NGOs. International left-leaning supporters of the revolution project, including a large number of Cuban physicians who had provided services in rural and remote areas during the 1980s, were pulled out of the country (88). The country's dependency on external resources for financing health services became transparent as pledged European funds were withheld based on loan renegotiation and the country leaned upon USAID funds to fill the gap (150). Both the government and conservative international organizations struggled to balance the use of an effective PHC model while defining their stand as anti-Sandinista.

Structural adjustment programs further restricted autonomy in health investments and promoted private sector growth. Salaries remained remarkably low for health professionals and long-lasting strikes led by FETSALUD (the health workers' union) were repeatedly held in the early 1990s, shutting down hospitals and clinics for months at a time (150). Severe budgetary constraints led to extreme medicine and materials supply shortages in the public sector, creating a greater demand for private services. Prescriptions written in public centres were almost always filled by private pharmacies (150). The de facto growth of the private sector was unregulated and uncontrolled. Public sector clinics and hospitals began charging user fees for some diagnostic services, a practice that became formalized in 1993 under a national fee schedule that applied user fees for primary care services[32] (88). Private sector jobs offered (and continue to offer) more attractive salaries and greater training opportunities to health professionals than were available through the public sector (175), shifting qualified personnel away from public services. While socio-economic

[32] An exception was made for prioritized populations (pregnant women and children under five years of age), chronic vector-borne diseases (such as TB) and sexually transmitted disease.

polarization intensified, MINSA continued to depend on *brigadistas* to provide community service for health campaigns (150) despite the change in non-socialist economic philosophy.

The restructuring of the 1990s involved the re-institution of a private insurance scheme for government employees, un-controlled expansion of private sector services and decentralization. The system's unrestricted growth and lack of regulation led to the creation of a chaotic, mixed system wherein private services are offered in public settings and vice versa. The decentralization of MINSA resulted in weakened central accountability for the health of the population due to the favouring of curative services and weakened regional accountability due to the maintenance of central power and budgetary control (88, 176). Contrary to the purported intents of this restructuring, "the conflation of the decentralization process with budget cuts and the establishment of user fees, privatized hospital wards and managed care arrangements…has helped mask these measures as technocratic innovations rather than as highly politicized measures aimed at shrinking the public sector and making health services a purchasable commodity" (p. 124) (88). As market-economy health services were favoured and socio-economic divides in an on-going environment of economic crisis and growing poverty grew deeper (160), fewer people were able to access health services (88) and greater emphasis was placed on curative, rather than preventive services (160). In the early 1990s, advancements in health indicators that realized in the 1980's began to reverse (89, 150, 160, 177).

There is a notable lack of literature available on Nicaragua's health sector following the Chamorro government[33]. The structural changes of the early 1990s restricting social sector investment and promoting private sector growth without regulation have essentially continued to the present time under the 2001 PRSP process and HPIC agreement (176). The conditions on social spending and restructuring of health services held substantial repercussions for primary care services. PHC, already pushed a model prioritizing target populations, moved into a characteristic SPHC package (86) with an emphasis on maternal-child health, vaccinations that aligned with global targets of reducing child and maternal mortality (178). Additionally, the negotiation of health planning and financing with pooled

[33] A Canadian-made documentary critically reflects on the intensity and power of media attention placed on Nicaragua during the 1980 Sandinista project. A sequel examines the sharp withdrawal of this attention following the 1990 elections. The documentaries explore the effects of globalization, global media and global public opinion on Nicaragua during a time of revolution, growth and crisis. For more information, see: http://www.frif.com/new2003/wsw.html

aid donors under the SWAps approach introduced in the mid 1990s led to further external pressure in setting priorities (87). Prioritization of programs, diseases and populations has become the norm as the government attempts to satisfy the demands of the international donors depended upon for financing and respond to pressure to meet targets in specific indicators. As a result, priorities within priorities shape the attention given to particular diseases and population sub-groups at particular times[34]. The tendency to focus on health campaigns and the prioritization of population sub-groups systematically creates inequitable distribution of resources, excluding large portions of the population.

3.4.3 Intersecting National Policy Capacity with Local Capacity: Nicaragua's National TB Control Program

The first programming for TB in Nicaragua was initiated following a 1964 prevalence survey conducted with the support of the WHO and UNICEF (179). This program was offered during the Somoza period, at a time when public health services were available largely in cities, and smaller or rural communities had little access to health care (165). It can therefore be assumed that only a small proportion of the population had access to the program. Between 1974 and 1980, case notification varied greatly and treatment results were not reported (180). Since that time, TB services have since been integrated, albeit isolated, within public health services.

Nicaragua was one of a handful of countries implementing an early national control program that was later standardized, supported by the WHO as an integrated strategy, and eventually named DOTS[35] (181). Between 1974 and 1980, case notification varied greatly and treatment results were not reported (180). The program received technical advice from the International Union Against TB & Lung Disease (IUATLD) throughout a process of re-organization and strengthening during the 1980s that mirrored IUATLD support of national TB control programs in Africa (180, 182). Financial support has historically come from external sources, with the Norwegian National Health Association providing funds with the goal of offering free TB diagnosis and treatment to the population in the early

[34] From grey literature and on-going discussions with Nicaraguan academics and health system analysts (November 2005-April 2006).

[35] The 'branding' of the *Framework for Effective Tuberculosis Control* as DOTS occurred in 1995, and then aggressively promoted by both the WHO and World Bank as the global 'solution' to TB. The term DOTS was proposed by Klaudt, an advocacy expert hired to promote the strategy, who coined the term by reversing the image of 'stop' (see: Ogden, Walt & Lush, 2003).

1980s (183). In 1981, incidence was estimated at approximately 48 per 100,000 population[36]. The first national standard norms were published in the same year (180). In the following eight years, short-course treatment for TB for passively detected cases and nationwide laboratory registers were introduced and implemented in each health region. The data from Nicaragua's NTP are therefore considered to be comparatively complete (180). Figure 3.2 below presents the trends in incidence of TB from 1973 to 2004. Reporting of smear-positive cases of tuberculosis, as separate from all forms, is first available in the late 1980s.

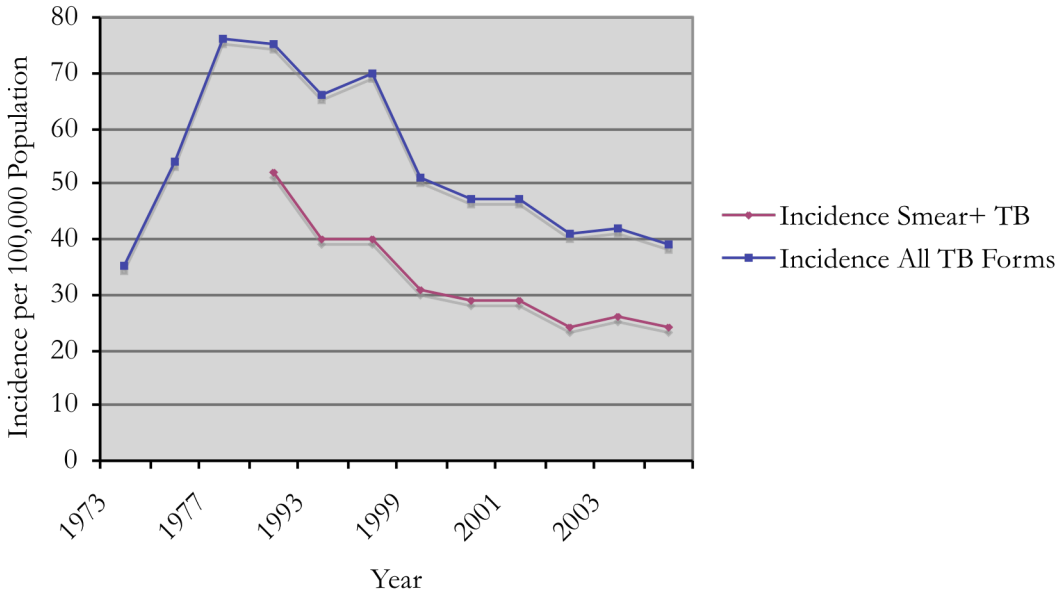

Figure 3.2: National Incidence of Smear-positive TB Cases and National Prevalence of TB (all forms) 1973-2004[37]

[36] Raw data for this year are not available. This is a rough estimate using data presented in Heldal, Cruz, Arnadottir, Tardencilla & Enarson (1997, p. 17). The authors state that "in 1981 a total of 1890 smear positive cases were reported", however the population estimate for the same year is not reported or readily available from other sources. The calculation of 48 smear-positive cases/100,000 was reached by comparing the incidence reported for 1989 (38 smear-positive cases/100,000); therefore, the population assumed is that of 1989 rather than of 1981 and the calculation is likely an underestimation.

[37] Official data published in: Castillo, O.C. (1978). Estado Actual de la Tuberculosis en Nicaragua. Ministerio de Salud Pública: Managua, Nicaragua; and Los Informes Anuales del Programa de Control de Tuberculosis, ediciones 1999-2004. MINSA: Managua. Incidence of smear-positive cases is available from 1988.

Nicaragua's NTP has been regarded as an exemplary, successful and effective control program in a resource-scarce setting (182). Despite functioning under conditions of war and extreme limitations on resources, the program has demonstrated a steady decline in reported incidence since its rapid expansion in the 1980s. Because of minor private sector involvement under the Sandinista government and extensive national coverage achieved through program strengthening in the 1980s, the 38 smear-positive cases per 100,000 population detected under the NTP in 1989 were considered to reflect actual TB incidence (180). In 1993, the national norms were updated under the recommendations of the IUATLD and WHO (184). By 1999, smear-positive incidence was reported at 31 per 100,000 population, representing a 40% reduction in reported incidence since the 48 per 100,000 reported incidence of 1981 (185). The incidence of MDRTB has remained low (186, 187) and cure rates have remained above 80% (188), reflecting appropriate and successful implementation of TB control measures. The NTP was considered successful and the IUATLD international training course was offered in Nicaragua in the same year (185).

Incidence of reported smear-positive cases and cases of all forms of TB has remained relatively stable since this time (see table 2.2 below). In 2000, the NTP reported the achievement of an 81% cure rate and case detection rates of over 80% since the implementation of national norms in 1981. In 2000, the NTP was approved for a project to enhance program activities under the financing of DFID and the WHO (189). In 2001, the program reported that delays in disbursements, lack of awareness about TB among the general population and among health personnel, geographic inaccessibility, lack of resources and lack of operationalized funds to meet administrative needs as the primary challenges related to the funding received under this project (189). In 2002, the program applied to the Global Fund for resources to fill the anticipated gap in funding with the completion of the DFID-WHO project (190). The report indicates that the program intended to direct activities funded by the Global Fund to eight prioritized health regions.

A study published in 2004 draws attention to the impact of structural health sector changes and the isolation of the NTP in this context. The study explored routes of access and incurred expenses through questionnaire-style interviews conducted with 252 TB suspects undergoing sputum examination at a public laboratory (191). The study showed that over half of participants visited more than one type of care giver, with only 56.7% of

participants using publicly provided health services as their first point-of-entry to the health system as a whole. With variability between regions, between 52 and 83% of participants had to consult health care providers more than twice and between 13 and 54% consulted more than three times before being referred to a public laboratory for sputum microscopy. Between 34 and 43% and 12-14% of participants reported incurring medical costs of one to two weeks median monthly income prior to being referred for sputum testing were reported. These expenses largely pertained to consultation and diagnostic fees and did not include costs due to loss of work or travel or lodging required for consultation (191). The study highlighted the complexities of pathways taken by PATB in being diagnosed and registered for TB treatment and the challenges faced by the NTP as private sector health services play an increasingly important role in the country.

Though the Nicaragua NTP has been an example of a successful and effective control program for TB, it is not isolated from the complexities of the Nicaraguan context. The NTP has demonstrated success in meeting global targets for TB control, but the program faces challenges in maintaining this efficiency and effectiveness in an environment of rapid, uncontrolled private sector growth and little coordination with private sector providers and MINSA. The relative stability in incidence of smear-positive cases could reflect the reaching of a steady state in detection of an endemic disease or may represent a lack of change in program activities that would encourage greater case detection. The later is of particular concern given the identification of a general lack of public and health professional awareness of TB, as identified in the 2001 annual report. The program has relied upon external sources of funding to support program activities since it was reorganized and expanded in 1981, suggesting an on-going need for continued external support. These challenges are critical considerations in this study's exploration of the Global Fund as a new financing instrument for TB in Nicaragua.

3.4.4 New Financing for TB: The Global Fund in Nicaragua

Nicaragua was approved in Round 2 for funding from the Global Fund. Phase one, the two-years of program funding, was scheduled from March 1, 2004 through February 28, 2006 (41). A total of 1,271,820 USD was approved for this phase, with an additional 1,535,744 USD conditionally approved for a second, three-year phase based on

performance[38]. This provides the NTP, as the main sub-recipient of the TB component, with 635,910 USD per year for the first phase of funding and 511,915 USD for each of the following three years. For comparison, the NTP reported an approximate annual budget in "recent years" (p. 12) for program-related activities, health personnel salaries, infrastructure, drug procurement, and laboratory support as approximately 600,000 USD, supported by both MINSA and external funding (189).

The grant agreement for TB outlines the program implementation abstract, entitled 'Nicaragua Commitment and Action against Tuberculosis' under the principle recipient, *Federación NicaSalud*. The program goal is "…to reduce the incidence and mortality of tuberculosis, with active citizen participation, in seven (65% of the population) departments/areas in Nicaragua" (p. 18) by increasing case-detection of smear-positive cases, increasing cure rates under DOTS, and reducing DOTS treatment abandonment (41). The targeted groups include the general population, people living with TB, primary school children, adolescents/youth and people living with HIV/AIDS and TB co-infection. Below, Table 3.2 presents the objectives, key indicators and targets outlined in the Grant Agreement as well as the percent of target reached during the phase one of the Global Fund grant, as reported by the Grant Scorecard (192) and the Grant Performance Report (193) for Nicaragua's TB Component of their Global Fund grant.

The Grant Performance Report for the TB component of the Global Fund grant to Nicaragua, conducted in March 2006, highlights the achievements of the GFP over its first phase. According to this evaluation, many of the grant's targeted indicators were exceeded, particularly those pertaining to the expansion of community DOTS, the control of contacts, and the expansion of HIV services tied to patients receiving treatment under the NTP. Of the three indicators that the GFP was performing below expectations on, the poorest performance is the number of patients with MDR-TB receiving DOTS-plus treatment. This particular indicator is, however, calculated based on numbers less than twenty, so the percent achievement is greatly affected by a proportionally small number. The Grant Performance Report addresses a few indicators that were not outlined in the Grant Agreement, namely the number of TB radio or television programs produced and aired

[38] Details of funding received under the Global Fund grant are available at: http://www.theglobalfund.org/programs/Portfolio.aspx?CountryId=NIC&Component=TB&lang=en

(target 2, actual 2), the number of patients who receive food packages (target 921, actual 621), and the number of municipalities that have at least one TB club (target 33, actual 54) (193). The majority of written evaluative comments focus on the need for greater technical capacity, particularly in management, as well as the need for greater adherence to guidelines provided for the function of the CCM. The grant was approved for continuation of funding into phase 2.

Table 3.2: Objectives and Key Indicators for TB in Global Fund Grant in Nicaragua[39]

Objective	Indicator(s)	Target Set	Baseline	Phase One Achievement	Global Fund Performance Rating
Strengthen inter-sectoral actions in the application of DOTS, with community participation (36 municipalities)	Percentage of health units implementing community DOTS according to MINSA guidelines	9 health units	0%	19	211%
	Number of community agents trained in community DOTS strategy	1220	Not Available	2809	230%
Promote a behaviour change regarding recognition of the symptoms and treatment of TB	Percentage of persons over the age of 18 (in 36 municipalities) who can identify the symptoms of TB (based on baseline and follow-up surveys)	30% Increase from Baseline	Not Available	To be Measured in Year 3	100%
	Percent reduction of patients under the NTP abandoning TB treatment before completion	8%	*9%**	7.86%	98%
Contribute to the operative enhancement of the program	Number of NTP and laboratory health personnel updated in the National TB care standards and procedures	2219	*60%***	1707	77%
Strengthen the implementation of TB preventive actions at the local	Percentage of recording of expected cases of acid-fast bacilli positive cases	80%	70%	Not Evaluated in Performance Appraisal	N/A

[39] Adapted from the Program Grant Agreement between the Global Fund to Fight AIDS, Tuberculosis and Malaria and *Federación NicaSalud* for the project: "Nicaragua: Commitment and action against AIDS, tuberculosis and malaria" and the Grant Performance Report conducted in March 2006 (see references). Please note that italicized targets or baselines are from the Grant Agreement tables outlining program objectives and key indicators (See Table H-2, p. A-46).

level					
	Percentage of new smear positive cases detected under DOTS	70%	75%	60%	80%
	Percentage of control of contacts carried out on children >5 years old	2687	*79%***	2771	103%
	Percentage of HIV positive patients requiring chemo-prophylaxis treatment that receive it according to MINSA standards and guidelines	*10% Year 1* 165	0	188	114%
	Number of non-attending NTP patients recovered	50%	*111 (2002)*	59%	123%
Offer quality care to patients admitted to the NTP	Percentage of patients cured with DOTS	82%****	71%	84%	102%
	Number of patients receiving treatment with DOTS-Plus following the Green Light Committee guidelines	0% (2003)	6 patients in Year 1 *(50% of MDRTB cases)*	3 patients	50%
	Percentage of TB patients admitted to the NTP that receive counselling and are tested for HIV	0% (2003)	510 Patients *(35% in both Years 1&2)*	466	91%

*This baseline reported in the Program grant agreement represents the percentage of patients abandoning treatment.
**The baseline reported for this indicator was provided in a percentage whereas the Grant Performance report provides counts
***The 79% reported baseline is followed by a goal of giving 7998 units of PPD over two years to children under 5 how are identified as contacts.
****The target provided in the Grant Performance Report (82%) differs from the target provided in the Grant Agreement (85%)

The strategies for TB outlined in the grant agreement shadow those of the NTP. The DOTS strategy is highlighted as the key program, emphasizing the need for community participation for strengthening and reinforcement. The promotion of knowledge for identifying symptoms of TB, strengthened prevention activities as well as improved quality of care for patients within the NTP are also listed as strategies for the funded program.

The agreement also outlines specific activities for the achievement of the goals and objectives. These include: DOTS training for government workers and community leaders; publication of manuals for community DOTS; improving laboratory equipment; provision of chemo-prophylaxis for HIV-positive patients; provision of food packages for TB patients; outreach for registered patients not attending clinic for DOT; HIV testing for high-risk patients registered with the NTP; and implementation of the DOTS-plus strategy for MDRTB (41). These strategies are being undertaken with the technical support of the Pan-American Health Organization (PAHO) and the United Nations Development Programme (UNDP). The Nicaragua CCM is comprised of forty-seven representatives from various branches of the federal government, technical supporters, universities, NGOs, and civil society representatives (194). The sheer bulk of the CCM poses potential for difficulty in maintaining effectiveness and ensuring equitable participation.

As in Ethiopia (124), Global Fund monies have been used, in part, to expand community participation through the 'TB clubs' (41). The impact of the establishment of TB Clubs is touched upon by the research conducted by CIES and the Damian Foundation exploring social dimensions of stigma and TB (129). The emphasis of Nicaragua's Global Fund program on social determinants of health, human resource strengthening and program enhancement touch on a broad range of population health determinants. The potential for the Global Fund to have broad, wide-reaching impacts is substantial, particularly given the sizable amount awarded to *NicaSalud* for each of the targeted diseases. Given the complex political background of health systems, collaboration in health and the historically isolated nature of the NTP create a complicated research environment. The indicators used for evaluation, however, do not always reflect the complexity of this context or the extent and impact of programming resulting from a Global Fund grant.

3.5 Tying it All Together

This exploration of contextual dimensions of the analytical framework used to guide this study draws from a large body of literature to illustrate a complex research problem and draws attention to a gap in both the literature and the potential for evaluative indicators to reflect this complex reality. This study offers an opportunity to explore how policies that are driven by a global financing instrument are having an impact at a local, experiential level. The lack of research in Latin American countries receiving Global Fund grants makes this

case a particularly interesting study. The goals of the Global Fund, as one policy response to the momentum of the MDGs and a global public goods approach to infectious disease control, are to reduce the impact of AIDS, TB and malaria in countries of need, thereby contributing to the reduction of poverty and the achievement of the MDGs (13). The countries receiving Global Fund grants must independently adjust to and interpret the policies and guidelines for preparing funding proposals. This independence places unprecedented control and potential for ownership in country-driven programs.

Countries eligible for Global Fund support, including Nicaragua, are often facing limited resources, fragmented health systems and limited capacity to respond to the technical and logistical requirements of the Global Fund. The history and development of PHC or SPHC in recipient countries will play a role in how funds will be distributed and what kinds of programs will receive funding. The Global Fund language supporting grants that build upon scientifically sound, existing programs and requirement for the inclusion of DOTS indicators for evaluation of funding directed at TB means that the majority of countries will have the NTP listed as the primary recipient. The experiences of recipient countries are highly contextual and important sources of knowledge for understanding the impact of Global Fund policies.

Making connections between global policy and local experiences requires the detailed consideration of the complexities discussed in this literature. The analytical framework for this study has guided the development of a study design that engages stakeholders at multiple levels of the national context and examines policy context at both the global and national levels. The questions developed from this research problem stem from the model of population health promotion presented in Chapter 1, allowing for the exploration of experiences with the Global Fund from a perspective that considers structural, social and environmental determinants of health in addition to the traditional focus on health care within TB control programs.

Chapter 4 Experienced Dimensions—Results from Fieldwork

This chapter presents results emerging from four methods of data collection from November 2005 to April 2006: participatory observation, interviews and the focus group activity (with further contextual analysis). The results are presented in an integrative manner, drawing from relevant sources of data to illustrate findings under a particular research question. Key documents for analyses were selected according to the analytical framework presented in Chapter 1 and are summarized in Table 4.1 (see Figure 1.2 for Analytical Framework and Appendix G for applicable details from source documents). Original data sources were in both English and Spanish. The researcher translated all quotes used in this chapter (see Appendix E for original Spanish quotes with English translation). The documents are referred to by an abbreviated name throughout the text, as outlined in Table 4.2. Data are organized by key interest area; specific research questions are highlighted with a border.

Experiences related to population health dimensions of the research setting are explored first to frame contextually the results, building from the literature presented in Chapter 3. The chapter then examines responses to the research questions in each key area of interest: TB control, health systems and health rights. Study results for TB control include National Tuberculosis Control Program (NTP) and DOTS-related impacts and an exploration of issues related to cultural, geographical and financial accessibility. Health systems data illustrate perceived Global Fund impacts related to public sector health personnel, collaboration or integration with private sector actors, and other health programs. The data related to health rights follow, concentrating on Global Fund impacts on the right to health[40]. The chapter concludes with a presentation of general experiences with the Global Fund—both as a five-year project and as a financing instrument in aid for health.

[40] As previously defined according to the ICSECR, see p. 5; see also Appendix D for Health Rights cue card

Table 4.1 Conceptual Map: Sources of Data Accessed[41]

Dimensions Explored		Level	Analytical Framework Concept	Contextual Components Explored	Sources Accessed
Contextual Dimensions		Global	Super-ordinate Contexts	• WHO policies (DOTS) • Global Fund policies (Application processes) • Historical Context: globalization & infectious disease; financial aid for health; development of the Global Fund	• WHO Documents (DOTS) • Global Fund proposal guidelines & strategic framework • Literature & contextual analysis
			Macro-economic Policies	• SAPs, PRSPs • Global trends & impacts on health systems	• Literature & contextual analysis
	Experienced Dimensions	National	Domestic Policy Space/Capacity	• MINSA policies • NTP policies & progress • National Context—History, health systems, development of NTP • CONAPAT	• MINSA National Health Plans • NTP Annual Reports • Health & Economic statistics from private census (INEC) • Literature & contextual analysis • Participant observation • Interviews • Focus Group
		Regional	Local Policy Space/Capacity	• SILAIS capacities • TB Clubs	• NTP Annual Reports • Literature & contextual analysis • Participant observation • Interviews
			Contextual Components	• Accessibility of services • Geographic disparities • Community capacity—TB Clubs • Urbanization	• Literature & contextual analysis • Participant observation • Interviews
		Local	Contextual Components	• Socio-economic context • Health behaviours • Health & Social Expenses	• Literature & contextual analysis • Participant observation • Interviews

[41] Developed from Analytical Framework presented in Chapter 1 (Figure 1.3, p. 16)

Table 4.2: Descriptors for Key Source Documents[42]

Descriptor*	Original Document Title
Global Fund Framework	The Framework Document of the Global Fund to Fight AIDS, Tuberculosis and Malaria: Title, purpose, principles and scope of the fund
Proposal Guidelines	Guidelines for Proposals (July 2002--Round 2)
Grant Proposal	Nicaragua--Commitment and Action against AIDS Tuberculosis and Malaria
Grant Agreement	Program Grant Agreement between the Global Fund to Fight AIDS, Tuberculosis and Malaria and *Federación NicaSalud*
PB-Guidelines	Guidelines for Performance-Based Funding (July 2003)

*Please note that these descriptors are used in text for Chapters 4 & 5

4.1 Local Government Policy & Capacity: Contextualizing the study

The purpose of this study was to discover and examine local stakeholders' experiences and understandings of, or related to, Global Fund policies relevant to TB services in Nicaragua. The complexities of Nicaragua's socio-political and historical context were explored in Chapter 3. Though it is beyond the scope of this thesis to analyze all aspects of the Nicaraguan context, several key components are useful to explore for the contextual analysis of the study. Data emerging from participant observation, interviews and the focus group agreed with the contextual analysis of both population health determinants and changes in health care systems during the three periods of Nicaraguan history presented (Pre-Sandinista, Sandinista and Post-Sandinista). The concept of Nicaragua as a country with many needs repeatedly surfaced as a concern or on-going challenge in the lives of populations across varying socio-economic levels. In casual conversation and through formal interviews or study-related activities, it was common for individuals to connect a negative event or situation with the country's ongoing state of extreme need. Need was often perceived as a causal factor for issues such as migration, lack of institutional capacity and disparities or insufficiencies in health infrastructure. The perception of need and its association with poverty were commonly expressed as aspects of identity for both the

[42] All source documents can be accessed online from the Global Fund's homepage: http://www.theglobalfund.org/en/; Round 2-specific documents can be found under 'Current Funding Rounds' at: http://www.theglobalfund.org/en/apply/current/#2; and Nicaragua-specific documents: http://www.theglobalfund.org/programs/countrysite.aspx?countryid=NIC&lang=en

country and its populations. One participant spoke of how the context of extreme needs is translated into low public investment in health and little internal capacity to cope with a seemingly cyclical creation of greater needs:

> In the field of health, Nicaragua has very few investments…very small investments. The latest data say that per year, Nicaragua invests around twenty [US] dollars per capita from the public [sector]. And, in total, the country invests some 177-78 [US] dollars per year[43]. We're talking about a very small investment. In a country that has almost two thirds of the population [living] in poverty and with almost 17-18 per cent in extreme poverty, we're talking about a population that has many needs. And [the country] has no capacity to resolve it.

Political polarization and the perception of political power as centralized among an elite few were tangible throughout the study period. This study took place in a year leading up to an election[44]. From observation, discussion and exploration of Nicaraguan political culture, I observed a general openness to political discussion, propaganda and public debate, but guardedness in expressing personal affiliations or beliefs. It was, for example, uncommon to have a conversation in a taxi, on a bus or over a lunch meeting that did not touch on politics in one way or another; however, politics were most commonly discussed in the third person and rarely expressed as a direct personal value statement. Much discussion focused on the up-coming elections. Many people seemed disenchanted by corruption in the political process and held little hope for seeing positive post-election changes in the context of extreme poverty, high unemployment and desperation that Nicaraguans face daily.

This polarization can be felt in the literature of the 1980s and early 1990s, much of which examines Nicaragua from an either pro- or anti-Sandinista perspective. There are two notable gaps in literature that reflect political alignment among *internacionalistas* and the academic community—the first of which is from the period leading up to the revolution and during the first two years of the Sandinista government and the second of which reflects the period following the early 1990s[45]. The Sandinista project received a great deal of attention

[43] In comparison, Canadian health investment was estimated $4411 (CDN) per capita in 2005 (CIHI. Health Care in Canada 2006. (2006) Canadian Institute for Health Information: Ottawa.)
[44] Held once every six years. The next election is scheduled for November 2006.
[45] As was noted in Chapter 2, this phenomenon is explored through the documentary "The World Stopped Watching". Though the film focuses on media attention, I found it useful during a time

from supporters of primary health care, social justice and, at least in the beginning, was marked by intense international energy and excitement. This energy faded as the *Contra* war intensified and Sandinista capacity to maintain the project waned; neither was criticism for the economic model adopted by the Chamorro government in the 1990s sustained. Understanding the complexities of Nicaragua was challenging under these conditions—the literature available from both internal and external sources was often politicized and sparse.

This political polarization exists in a country with scarce resources and a population living in extreme need. Given the imbalance between needs and resources, the culture of *prioritization* was a key contextual factor influencing the experience of the Global Fund in Nicaragua. Competing national priorities are used for political propaganda, criticism and attack. Among these priorities, little attention is given to the low-ranking social investments such as health. The unofficial ranking of national priorities is further influenced by external political agendas. Within the health sector, external influence and power can be seen through the vast number of international or internationally supported NGOs providing services in Nicaragua. International presence, accompanied by international financial support, is not without political influence. Each international organization brings a particular agenda with which priorities are set. This external pressure was, and remains, compounded by the overwhelming imbalance between needs and capacities that demands priority setting.

On a national level, the prioritization of primary care activities began with the internal structural adjustment taken on by the Sandinistas during the mid to late 1980s. As financial capacity for social sector investments lessened, prioritization of health service activities became a necessity. This process has intensified with pressure to meet particular internationally agreed upon goals that emphasize maternal and child health as key development indicators[46], leading to a focus on Selective Primary Health Care (SPHC) interventions aligned with these health goals, to the relative neglect of others, such as TB control. Prioritization is thus a cultural and contextual factor driving policy decisions, resource allocation and human resource investment in health.

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when I was struggling to find literature that would provide a more balanced picture of the chaotic structure and restructuring of the Nicaraguan health care sector I was trying to understand.

[46] For example, the World Development Indicators (World Bank), the Human Development Reports (United Nations), and the MDGs (United Nations) all list maternal and child health as key indicators and measures for progress.

Priorities within priorities contribute to the complexity of this dimension. In a health sector that already ranks low on the national agenda, the NTP was perceived as one of the lowest priority programs within MINSA. One participant captures well the dimension of prioritization within the Nicaraguan context:

> One doesn't realize that the issue of health is not among the priorities on the national agenda. And you can see… in the country, we've actually been in the middle of a medical strike for more than three months…and it would seem that nothing has happened! Right? It gives the sensation that nothing happens! …the government sits back and nothing is happening…as an example…this illustrate that the [health] system is a non-priority. I believe that there is awareness that the system is inequitable. There is awareness that the system is inefficient. There is awareness that the system is not resolving the country's problems in an effective way; but, at the same time…it's not the priority…and I would say there, not just among national authorities. I feel that in the country, there are other priorities. They are talking about other priorities…[perhaps] because there are too many…elements in the discussion of the national agenda, and in the end, health ends up in eighth, tenth place. In fact, interestingly, in some public opinion polls health not always, or better I say almost never appears as a primary concern.

Another participant expressed her perception of the TB program as low among priorities within the already low-priority health sector:

> The truth of the matter is that the tuberculosis program…was a program that didn't receive financing…to carry out its activities. For example, the vaccination program? [It] receives financing from everywhere…there's the attention in maternal-child [health]…they have a ton of offices…it's incredible, all that they have—the maternal child health and the funding that they receive for family planning, for pregnancy care…for training in emergency obstetrics for rural areas…but tuberculosis, no.

It is in this environment of priorities, limited resources and pressure to meet international targets for particular indicators that the Global Fund entered into Nicaragua. This contextual dimension is inextricable from the perceptions, understandings and experiences of the Global Fund in Nicaragua and is a critical consideration in the experiences explored in this study.

4.2 Connecting the Global with the Local: Local experiences with the Global Fund

The study sought to examine what people are experiencing with the Global Fund and how it is having an impact at the local level. The following results are presented by key interest area (TB control, health systems and health rights) and by research questions associated with each, in turn. A final section explores the Global Fund as a five-year country-led project and as a financing instrument. Many participants referred to the presence of the Global Fund as *"el proyecto Fondo Global"*, or the Global Fund Project (GFP). This term is used frequently in the text below.

4.3 TB Control

For the purposes of this study, TB control was defined as encompassing those activities described in the National Guidelines of the NTP. These activities follow the five components of the DOTS strategy: standard short-course chemotherapy for confirmed cases, recording and reporting strategies (with associated measurable indicators), uninterrupted supply of quality-assured drugs access to quality-controlled sputum microscopy and sustained political commitment (8).

What impact is the Global Fund Project having on TB control at local and regional levels?

This question was intended to explore how the presence of the Global Fund is having an effect on the control of tuberculosis according to the DOTS strategy. The research questions for TB control thus address various measurable, quantitative aspects of the NTP as well as issues of recording and reporting, access to drugs, laboratory capacity and political commitment.

4.3.1 Measurable Indicators

Global Fund policies, in alignment with the global targets of the MDGs and other international policy institutions such as the WHO, support proposals which base activities and programming in the 'fight against TB' on the DOTS strategy. The Global Fund Framework and Proposal Guidelines state that successful proposals will support the expansion of scientifically sound, cost-effective programs for TB control. The Global Fund Framework and Proposal Guidelines expand on this by requiring the incorporation of measurable indicators built into the DOTS recording and reporting strategy into project

proposals. Given the Global Fund focus on additionality[47], these requirements imply that countries must expand upon existing DOTS-based programming. In Nicaragua, this requirement led to prioritizing certain departments[48], enhancing community participation through TB clubs and increasing collaboration with HIV/AIDS programming by offering testing and counseling to PATB to meet targets for measurable DOTS indicators (41). Each of the program objectives and key indicators provided in the Grant Agreement list DOTS-specific indicators as measurable outcomes for the GFP. The Grant Agreement, for example, identifies the "percentage of patients under the NTP abandoning TB treatment before completion" (p. 23) and "percentage of patients cured with the DOTS strategy" (p. 25) as key outcome indicators for activities funded with the Global Fund grant (41) (see also Appendix H).

Reference to these indicators was commonly made in participants' responses to questions about how they felt their work has been affected by the presence of the Global Fund. Several participants in the administrative and clinician groups commented on the changes they have noticed in increased case detection and reduced treatment abandonment as a result of activities implemented with the GFP. Participants attributed increases in the number of people they were testing and detecting to the establishment of community networks with TB clubs and improved awareness with community education campaigns. As one administrative participant reflected:

> …this is the greatest impact we've had, the TB Clubs. They've improved the detection, we are detecting more coughers, that's not to say patients with TB, but symptomatic coughers so that they can be examined.

Improved case detection, however, was not always considered to be sufficient. One participant commented on the need for greater participation and support from the municipal governments, saying:

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[47] Additionality, according to the Global Fund, implies that projects will add to or expand upon existing programming

[48] Nicaragua is politically divided into departments that function as regions under the central federal authority. These departments have less autonomy than, for example, Canadian provinces and are not independently governed; but instead provide political representatives to the national assembly. Exceptional to this are the two autonomous regions of the Atlantic coast, both of which support independent governments. Health care is a centrally regulated aspect of this political division, however, and regional health authorities, called SILAIS, are placed in each of the 15 departments and 2 autonomous regions. For a detailed political map, refer to Chapter 1 (p. 7).

> ...it's [case detection] improved, it's increased a little, but we continue with low rates. We have to work hard on this because this is actually one of the weakness we have, in reality we have little capacity because we have a large population…this is where we've been stressing the importance to the municipalities so that they work to improve the capture [of TB cases]…

A reduction in the number of patients abandoning treatment before completion was perceived as another GFP advancement in the NTP. One regional administrator commented:

> …here…we were one of the regions that had a high incidence of abandonment, high rates of abandonment, and ultimately we've been able to reduce [the number of] these defaulters. I consider this to be part of the result of the interventions that they've [the Global Fund Project] come to do.

Gaps in publicly available NTP data make comparison of these perceptions with reported data difficult—data from 2004 are not yet available and abandonment for 2003 was not reported. Abandonment, or default, from DOTS treatment is reportable to the WHO. The WHO offers an interesting table of so-called "unfavourable TB treatment outcomes" in Nicaragua between 1995 and 2003 (195). The table shows default to be the most common source of unfavourable outcomes, representing approximately 8-10% of all new smear-positive cases in a year. Between 2001 and 2002, little change is notable in the proportion of unfavourable outcomes related to default; however, a slight drop can be seen between 2002 and 2003 (see Figure 4.1 below). The implementation of the GFP in 2004 may be accompanied by further decreases in rates of abandonment; however, more recent data are not available to verify this study's observational claims.

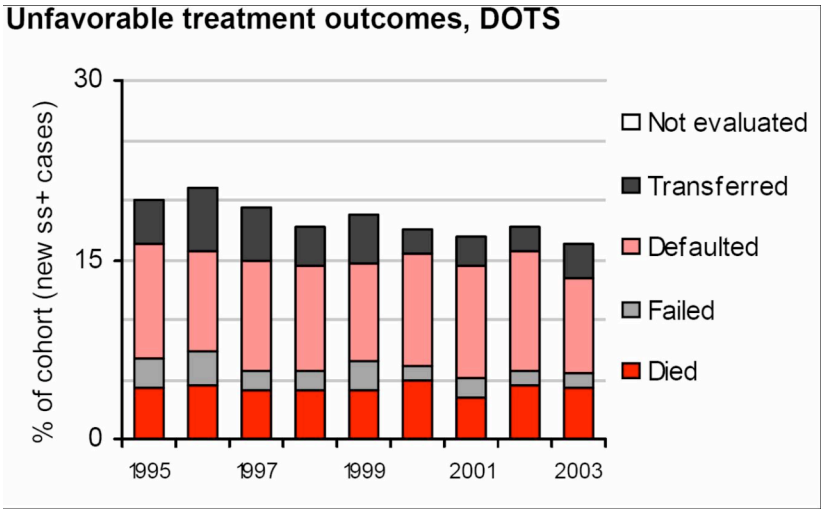

Figure 4.1 Default among SS+ Cases in the Nicaragua NTP[49]

Using case detection rate (CDR) as an evaluative indicator can be problematic due to the challenge of estimating actual incidence. Estimating CDR is particularly difficult in Nicaragua because no recent prevalence survey data are available. Nonetheless, the NTP bases estimations of CDR on a calculation that uses first contacts in individuals over 15 years of age in the public health care system, assuming that 2% of all first contacts will have respiratory symptoms and one in twenty of these individuals will test sputum-smear positive for TB. CDR is calculated by comparing detected smear-positive cases to the number of anticipated cases, as determined through these two assumptions. This indicator is reported to both the WHO and the Global Fund and was observed being used to determine if individual SILAIS were functioning at anticipated performance levels. Reported CDR available on the Global Fund website and through the WHO does not match what was found in data published through the NTP Annual Reports.

Given the potential for a misrepresentative denominator in this calculation, it may be more useful to consider the number of sputum-smear examinations performed in comparison to the number of cases found. This comparison is limited by a lack of data availability for 2005, however data from 2000-2004 offer some insight into case detection in Nicaragua. Figure 4.2 displays the proportion of new smear-positive cases (pale bars) next to all sputum smear examinations conducted (darker bars) between 2000 and 2004[50]. The

[49] From: WHO. Country Profile, Nicaragua. 2004 [cited 2006 2 Sep]; Document on the Internet]. Available from: http://www.who.int/GlobalAtlas/predefinedReports/TB/PDF_Files/NI_2004_Brief.pdf
[50] Sputum examinations conducted in 2003 were not available in the NTP Annual Reports

figure demonstrates that when there was an increase in sputum exams conducted in non-prioritized SILAIS[51] in 2003, the number of cases detected decreased slightly. When the number of cases found to the number of sputum exams conducted is compared, non-prioritized SILAIS do proportionally more testing and find proportionally fewer cases than do prioritized SILAIS. In contrast, prioritized SILAIS found fewer cases as the number of sputum exams conducted decreased in 2003.

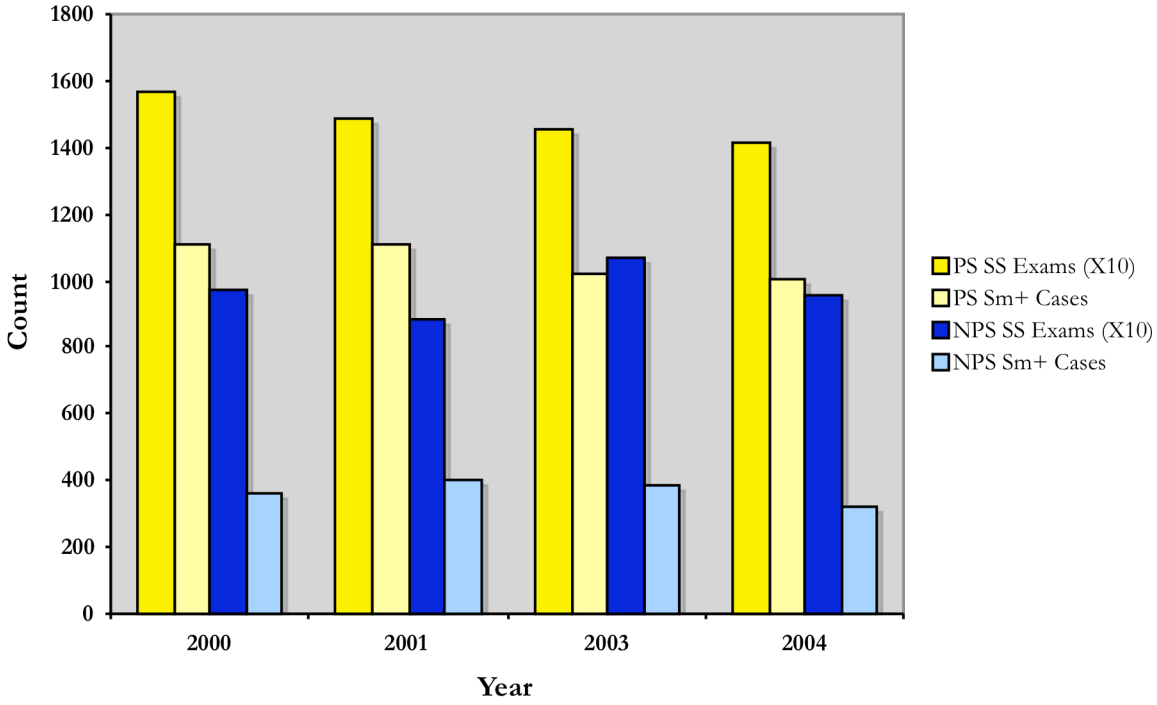

Figure 4.2 Incident Smear Positive (Sm+) Cases and Sputum Smear Examinations in Prioritized SILAIS (PS) versus Non-prioritized SILAIS (NPS)

[51] SILAIS is the Spanish acronym used to describe regional health authorities. There is one SILAIS for each of the 15 departments and both of the 2 autonomous regions of the Atlantic coast.

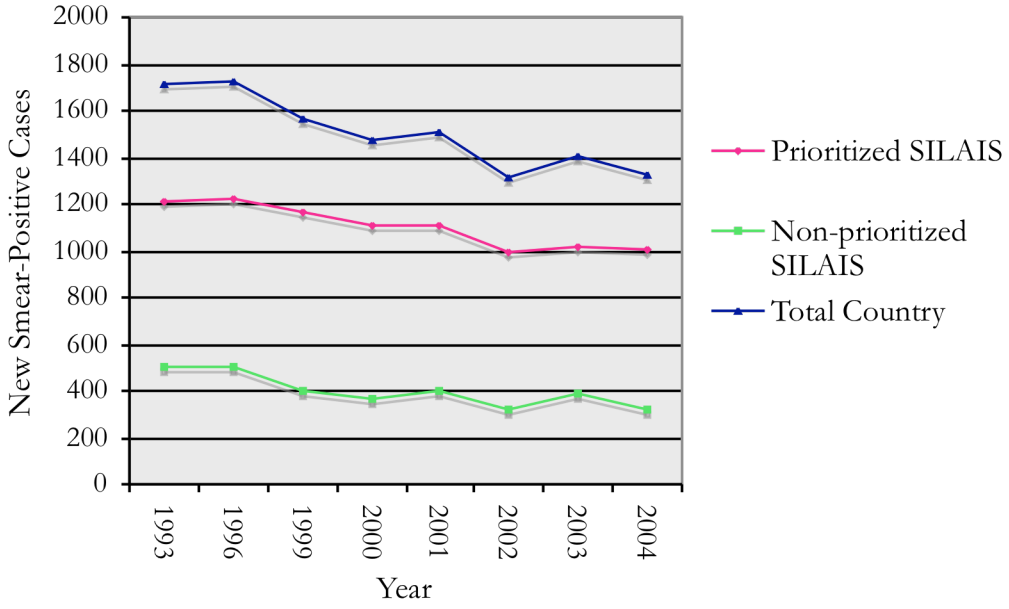

Figure 4.3 Annual Smear-positive TB Cases Detected in Prioritized and Non-prioritized SILAIS 1993-2004[52]

Non-prioritized SILAIS are testing more and finding fewer cases, whereas prioritized SILAIS are testing fewer and finding fewer cases. This may be due to a number of different factors; however, the difference reflects that either more people are being identified as symptomatic, or are being tested for TB or some combination of both in non-prioritized SILAIS compared to prioritized SILAIS. Another look at case detection trends since 1993 shows slow but steady decline in the number of smear-positive TB cases found in both prioritized and non-prioritized SILAIS (see Figure 4.3). Data for 2005, once available, will provide valuable insight into the effectiveness of activities intended to improve case detection under the Global Fund.

4.3.2 Facilitating Communication through the Global Fund

Administrative participants unanimously commented that computers purchased through the GFP had improved their capacity to maintain a complete, accurate and consistent recording and reporting system and enhanced the communication and sharing of

[52] Data as published in the National Tuberculosis Control Program Annual Reports (Years: 1993, 1996, 1999, 2000, 2001, 2002, 2003, 2004)

experiences between health regions and between regional and central administration. One regional administrator stated that the use of computers had allowed the regions to "…speak the same language…" and was pleased with the new consistency in presenting and analyzing regional data:

> …It's something new, the presentations of each [health region]…to tell each other about the experiences we've lived in the year, because before we only sent in this [folder]. I sent it to MINSA central and they received and that was it. We didn't do evaluations or analysis about how I [the regional office] am, of what I think and do…we didn't have this administrative forte…

Some local-level health practitioners, however, felt that the lack of access to computers at a local level was both a financial burden and a challenge. The administrative requirement for computer-generated reports at a local level necessitates access to a computer. The use of cyber cafes for completing this work brings confidential TB registers into public spaces. This is particularly problematic if the health care personnel lack the skill or capacity to use a computer for their reporting. One participant commented,

> …here there are many things that we need…for example, the program needs a computer because, as you know, all of the papers should be [done on a] word processor…so the last time the regional office asked me for a report I sent it to them typed [on a type-writer] and they sent it back to me. I don't now how to type on a computer, I told them. [But] we don't have [a computer]…so I've had to go and pay [from my pocket] at a cyber café so that they would do the work for me…

During field visits, meetings and interviews, I observed a clear presence of the Global Fund in the regional offices of the NTP. Each office I visited had a computer, filing cabinets, and in some cases a desk with Global Fund logo stickers on them. I found regional administrators using their computers for communication as well as for the preparation and presentation of annual NTP data. Furthermore, I noticed consistency in the reporting, analysis and sharing of key program data across a number of health regions participating in interviews or other events. I did not observe this presence at the local level, where Global Fund logos or stickers were either not present or visible only on print materials such as posters and the NTP guidelines document.

4.3.3 Drug Supply

Appropriate first-line medications were observed in ample supply at clinics visited by the researcher. The expansion of NTP capacity to treat MDRTB through the procurement of drugs from the Green Light Committee[53] was listed among the program objectives for the GFP. During participant observation opportunities, stakeholders on several occasions discussed the introduction of combination drugs to reduce treatment from eight months to six; however, at the time of this study, combination drugs had not yet been introduced to the health regions participating in the research process. Few participants commented on medication availability or quality, though some participants at the local level felt that the access to medication had become more consistent over the last few years. One administrative participant highlighted the movement toward the use of combination drugs as a key success for the NTP resulting from the GFP and another administrative participant named the purchase of medication to treat MDRTB as a success of the GFP.

4.3.4 Laboratory Capacity

Two administrative participants listed the training of laboratory technicians among the general advances in health personnel capacity as part of the GFP. Another administrative participant states,

> …we've strengthened and improved the diagnostic capacity of the laboratories with the purchase of microscopes, the replacements for microscopes…

One regional level administrator expressed concern over laboratory safety and infrastructure, stating,

> …I have problems with one health post over there…the laboratory is no good, they're in bad shape…or that is, she [the lab technician] does it [smear microscopy] but it's very risky because the location is very small…I went and saw it and said, 'she's right'. Because we're thinking that she could become infected, but they're still trying to do it…but they do very little so that she isn't exposed too much, because it has no ventilation…so I said, perhaps [there could be] some help from the Global Fund, because they could make a small laboratory room, or a small room where the conditions [were] a little bigger…to expand it…

[53] Committee established to facilitate procurement of second-line drugs for the treatment of MDRTB and to assess program readiness/compliance with the DOTS-plus guidelines. See: http://www.who.int/tb/dots/dotsplus/management/en/index.html

No laboratory staff participated in interviews or other research activities, though the researcher briefly visited two laboratories. Both labs were well kept and appeared to have adequate equipment and supplies to perform smear microscopy, though the space was small and ventilation was through an open door.

4.3.5 Political Commitment

Political commitment is defined by the DOTS strategy in terms of national financial commitments to program maintenance (111, 196). In the Nicaraguan context, sustained financial commitment is embedded in the complexity of national priority setting. The data presented here thus relate to concrete examples of sustained financial commitments as well as to addressing the prioritization of TB and the NTP. Participants in both the administrative and health personnel groups noted changes in political commitment following the introduction of the GFP in Nicaragua. The NTP has been a functioning public health program since the mid-1960s (179). As discussed in the literature review, the NTP has been integrated into public health services and has received external support, both technical and financial, for more than thirty years. The maintenance of a DOTS-based program since the early 1980s demonstrates some form of continued political commitment; however, on-going dependency on external funds highlights gaps between the sufficiency of this political commitment, internal capacity, or some combination of both.

Most participants in both the administrative and clinical groups expressed concern or frustration over the historical lack of prioritization of the NTP within the country context. For example, one participant stated, "…even the health authorities don't pay attention to tuberculosis…it's one of the weakness we have within the system…". Several administrative participants felt that the project had made both the NTP and TB more prominent in the country, implying that the increased funding and high profile nature of the Global Fund had affected the status of TB as a higher priority than it had been in the past. Concern remained, however, that other priorities and complexities of the public health system would continue to take precedent. One administrative participant observed,

> …the Global Fund supports the TB program, it is a support very specifically directed at one program…but this program is immersed, it is integrated in a health system where other programs are given much greater priority--maternal-child health, for starters. So, it is immersed in a health system, in an organization of health services that has many

> deficiencies, and there the program sits…where the program receives all of the punches and deficiencies of the same system, as much in quality as in the quantity of the resources around…

This sentiment was also reflected at the local level, where the majority of health personnel participating in the study felt that TB remained one of the lowest priorities in the country. One participant expressed her frustration with the lack of prioritization that TB receives:

> …What really disappoints me a little is Nicaraguan politics. And we talk about this a lot with other colleagues—the health policies don't have a separate package for this…the policies say 'no, we have to prioritize', we have to prioritize maternal-child health, there's maternal mortality-- but there are also patients affected [by TB]. So, what happens? With Nicaraguan policy, we can only have an opinion, because only the leaders on top have the power to outline their [budgeting] plans about what you're going to do. Because of this, if you start looking at Nicaraguan policy, you'll see tuberculosis…where is it? There it is…at the very bottom…the very end with maybe two or three activities…

There were a few concrete achievements in political commitment realized through the GFP: the creation of two additional, contracted positions in the NTP-central level administration; increased profile of NTP through the approval for this multi-million dollar grant and participation in the CCM; and the formation of the inter-institutional National Support Committee for Persons Affected by Tuberculosis (CONAPAT)[54]. The Ministry of Health has committed to supporting the additional contracted positions following the five-year GFP term. One participant considered this to be a contributor to longer-term sustainability.

The CCM membership is broad, involving some fifty actors (194). The administrative requirements of the Global Fund demand some form of collaboration between various policy and community actors. The CCM and CONAPAT are two collaborative forums that logistically offer greater exposure and representation of the NTP and potential for continued political commitment from these actors. One participant reflects,

> …it is a vision that doesn't stop here…the project will come to an end, but the CONAPAT won't stop there…this is something with the CCM too, and I feel this is true—that it is part of finalizing its role as a CCM,

[54] The CONAPAT is an inter-institutional committee initiated by actors outside of MINSA, but is now serving as an important component of the national efforts in TB advocacy

> this is it…to search for other alliances, to find other donors and it will be these structures that, as a country, will be able to maintain this…

Not all participants, however, felt that positive changes in political commitment were being achieved through this mechanism as it stands. One participant expressed doubt in the functional capacity of the CCM:

> …the idea was to create a forum space where you could discuss…national issues related to the themes of TB, malaria and AIDS…and, at the same time, to construct a more efficient mechanism...but we have actors with different…visions about these national issues…and now, from what I understand, once it started to function, in practice, some functional difficulties began to appear, on one hand. On one hand…that a mechanism such as this should first have anticipated [role] designations…in Nicaragua, the fact is that there have been many discussions about participation…there are many experiences around the theme of participation…in order to create a mechanism of this nature, if it is not well defined, then the very design [of the mechanism] becomes the main source of tension…

The participant goes on to discuss the need for clear rules and roles in the CCM, as well as respect for both. He further reflects on the lack of national capacity and experience with the type of collaborative leadership required by the concept of a multi-actor country-coordinating mechanism:

> …what happens because of the power struggle [between actors]? Sometimes, in what seem to be technical discussions, they are really talking about who gets to decide. So then this has to do with having a well-developed capacity to drive the project's processes…getting actors to agree is a very big challenge…for this, you need leadership…an agenda of ideas. As a consultant, I've felt that these processes don't move forward…they don't move forward. There is weak leadership among national authorities that, at times, makes the description [of roles], and this design, difficult. And in the end, they end up making a very autocratic decision at the non-governmental level or very democratic, but in the end, it isn't practical. So, it can't be in either of the extremes. The groups need first to learn how to negotiate, to come to consensus. I think the country coordinating mechanism is a good example of this phenomenon.

Both the CCM and the CONAPAT are mentioned in other contexts discussed below.

The profile of TB as a national concern was enhanced through a key study exploring the social stigma of tuberculosis in five municipalities under the support of the Damian Foundation, CIES and the NTP. The finalization activity, an event attended by almost all

regional administrators, several PATB and many clinicians working in the NTP across the country, was funded with monies from the GFP. The researcher also attended this event. The study culminated in a publication in a well-known journal, *Health Policy* (191). The study and its closing activity both contributed to raised awareness of the impact of TB on peoples' lives. This event offered a forum for PATB to share their stories and experiences with health personnel and highlighted the need for integrated approaches, commitment and understanding from health care workers. Additional research projects supported by the GFP were felt to have had an impact on raising awareness of TB in Nicaragua. In 2004, a study funded of the GFP was conducted examining community awareness of TB (188). The results of the study were felt to highlight the lack of basic public knowledge and understanding of TB.

4.4 What types of people are benefiting from the GFP at the local level?

Participants were asked who they felt were the beneficiaries of the GFP. Three main groups of beneficiaries were identified through the processes of interviewing and participant observation: the community, the program and its associated health personnel and PATB.

4.4.1 Benefits for Communities

The community was perceived as an indirect beneficiary of the Global Fund through the improved community education and awareness activities of the GFP, leading to improvement in the use of the program. One participant considered that,

> ...all of society as a whole, everyone [benefits]. Because we don't provide health services to any exclusive group, rather we offer treatment and diagnosis to everyone and the campaign that we've had on the radio, on television is directed at all of society. Logically we have more activities in areas where there is more poverty and greater incidence, but it is aimed at everyone...

Some participants felt that the development of community networks through TB Clubs was a particular advantage of the GFP for raising community awareness. One participant responded by ranking who she felt were beneficiaries of the GFP:

> …first, patients…the program accepts patients and next, the community…because they [the patients] are going to be spokespersons for the teaching that we're doing…for the knowledge that the Global Fund is supporting...the strength is in this network…the community

> network--that is the most important thing together with us [the nurses]…strengthen this network for prevention and promotion…

One participant emphasized the importance of case detection for the health of the community, stating, "…the community itself [benefits] because identifying one case is going to improve its health…". Another participant echoed this sentiment, focusing on communities living in poverty as a key beneficiary:

> …if you achieve an improvement in your case detection rate, and you manage to reduce the chain of transmission--break the chain of transmission, then of course you'll reduce the incidence of tuberculosis and, first of all, this benefits the population who are poor because they will suffer from tuberculosis less…

4.4.2 Benefits for Health Personnel and the National TB Control Program

The program and its associated health personnel were perceived as direct beneficiaries of the Global Fund by almost every participant in the administrative and health personnel groups. Most participants commented on the increase in training activities they have participated in to advance their own skills and capacities or to improve those of other players in the program, primarily *brigadistas*. The researcher observed an energy and excitement around the training-related activities in which she participated. One event aimed at establishing foundations for Community DOTS was attended by more than ten community leaders and *brigadistas* who received training on signs and symptoms related to TB, how to make a referral to a health centre and how to collect a sputum sample. In talking with these voluntary health workers, few had previously participated in NTP activities and most were glad to be learning more about TB.

This particular group provides a key link between communities and the program—they provide information to small communities throughout the country and, in rural and remote areas, are sometimes the only accessible health personnel. The *brigadistas* expressed concern over a lack of consistency in their training and felt that they did not have enough resources to do their jobs well. For example, they felt they were limited in what educational materials they could bring back to their communities and also expressed frustration over repeated training sessions that were theoretically focused rather than practical and often on the same topics.

Some participants in the health personnel group felt that the training they were giving and receiving as part of the GFP was a key strength in their capacity to perform their job. This was observed through a number of interactions, both formally through interviews and informally through participant observation. One participant felt that health personnel in the program were the primary beneficiaries of the Global Fund in Nicaragua, stating:

> …first of all, it is the health personnel [benefiting] because the health personnel receive training, they can improve their standing in the program, technical level, managerial level in the program…so, the health personnel are an important target group…

Another reflected on the ways in which health personnel were benefiting from training received as part of the GFP:

> …because, when, for example, we train them [the people responsible for the program], they leave with a better experience for their program, they are better prepared to cope with whatever problem or weakness the program has…the training is there for this…to help them, to update them...update their knowledge…

Additionally, the capacity of health personnel to engage in more frequent, consistent supervision was identified as a benefit to the program as a whole. One participant commented that health personnel were benefiting from the Global Fund support through "…the help that they send for home visits, supervision and training…". Most participants in the health personnel group felt that their ability to complete tasks related to maintaining effective program management in their area had improved in the last two years. This investment in human resource development seems to be an important achievement of the GFP.

4.4.3 Benefits for Persons Affected by Tuberculosis

PATB were identified by most participants in all groups as both direct and indirect beneficiaries of the GFP. Indirectly, they benefited as community members (see *Community as a Beneficiary* above). The food packages distributed to PATB under the GFP were a commonly identified short-term, albeit important, direct benefit of the Global Fund. One participant in the PATB group felt that the food packages received as an incentive and the support from the NTP were of direct benefit to both themselves, as an individual, and to their family, commenting that

> …they were giving us some aid…some bonuses for supplies…it helped…[they gave them to us] every week. And here they told me I couldn't work much, for at least a year I couldn't work. So, only [my wife] worked because we have four children and the package that she [the nurse] gave us helped a lot…for the children and everything…

Though the food packages were considered an important part of the program, many regional administrators and health personnel felt that there weren't enough to meet the needs of the populations they serve. In all of the health centres visited by the researcher, nurses or physicians responsible for the program had to select patients who would receive the food package because of insufficient supply. Most health centres estimated that between only 10% and 30% of the patients registered with the program out of their location were receiving food packages. One nurse reflected on the extreme need for these food packages and how she felt when she had none left to give out,

> …notice that with this food…they [PATB] themselves ask that it is never cut off…this food….in all of the countries where there is poverty…here there is poverty too…and generally the most vulnerable patients are those that have scarce economic resources…sometimes they don't even have enough for transportation. Today a patient came to me—what happened to him? [He said,] 'Many things happened to me and then I never got the money from my salary…I don't know why…I came here hoping you could help'. But I couldn't help him because I didn't have any bonuses left…but he came with the hope of finding a bonus so he could be able to support himself. I couldn't do anything…

The food packages also promoted completion of treatment and reduced abandonment. One participant commented about the food packages as an incentive:

> …because of this they haven't abandoned the program, for this package keeps them here…I said this to the regional administrators, let's hope they don't take it away because the patients aren't failing [treatment] because of these packages that we have…

4.4.4 How has accessibility to the NTP been affected by the GFP?

Accessibility to public health services can be described in terms of geographical, financial and cultural accessibility (197). Due to the passive nature of case detection in the DOTS strategy, accessibility in each form is a key to the success in achieving programmatic goals. Issues related to each of these types of accessibility are identified through the data presented below.

4.4.4.1 Geographical Accessibility

Geographical accessibility measures the extent to which services are both available and accessible to the population, including the distribution of health resources and infrastructure (197). Program coverage under the NTP has been reported as 100% since 1988 (185), indicating that populations in every department and region should have accessibility to the program. Despite this, several participants in all groups identified geographical accessibility as an on-going challenge in Nicaragua due to disparities between the Atlantic and Pacific coasts[55] and the high percentage of the population living in rural or remote areas not accessible by road. One participant illustrated the nature of general public health service delivery in remote areas of Nicaragua as she described her experiences delivering primary health care services to some of the more remote areas of the country:

> …the truth is that the population needs a lot of directly delivered services because of the inaccessibility that we have to work with…it was twenty-two days on horseback! Yes, twenty-two days on horseback…providing care…every three days we would change communities…there were eight communities that we were visiting…

Even in more centralized areas, health personnel identified geographical accessibility as a concern. One nurse draws from an example of a PATB who had visited the urban health centre she works at earlier in the day:

> …this young guy that you saw here comes from a hell of a place where he lives...he lives beside a field of cows and has to walk…you've got no idea…for some god-awful, rocky paths. You have to walk maybe half an hour on foot just to get from the bus stop to where this kid lives. And it's an awkward path…you have to walk through a corral where there is livestock…corralled cows…you have to walk through all of this to get to his house…

One participant commented on the inequitable distribution of health resources between the Atlantic and Pacific coasts, stating:

[55] Greater inequities, fewer resources and lower investments in infrastructure in the autonomous regions of the Atlantic coast are common expressions of the unequal distribution of resources in the country. The Atlantic coast is home to a diverse range of indigenous populations, hosting a variety of languages and cultures. Spanish, the country's official language, is not always spoken by populations on the Atlantic coast.

> …in Nicaragua, I'd say that around seventy percent of the resources are in the Pacific. In the country, there are serious problems with human resources in the Atlantic coast, in the northern part of the country…and this makes it hard…it complicates things…much of what is offered is poorly qualified…

This does not necessarily imply differentiated standards of training and practice within the NTP between the Atlantic and Pacific regions, but rather illustrates the general disparities that exist between these two regions of the country. Efforts to address some of this disparity have been included with GFP activities. For example, educational and promotional materials intended to strengthen TB awareness and knowledge have been printed in languages other than Spanish to meet the needs of populations living in the Atlantic Region. One participant commented,

> …the Global Fund has come to help us a lot in the education campaign, education and communication to the population…the reproduction of educational materials…including in our language…which isn't always Spanish…there are materials in Moskito…there are materials in English…because, well, to work in our country, it isn't just Spanish that is spoken. There are communities where they only speak Moskito. They don't understand Spanish or English at all. Moskito. So, if we want to have an impact on the population…to educate, to inform, to communicate with the population…you have to do it in their mother tongue…and with this, they've come to help a lot…

4.4.4.2 Financial Accessibility

Financial accessibility refers to the extent to which people are able, or willing, to pay for care (197). The services of the NTP are free of charge, however a PATB may incur expenses related to transport to and from the health centre providing treatment and/or, if the NTP is not the first point of contact, in the process of being diagnosed. Some participants identified lack of financial access to transportation as a barrier to both services and continuity of services. One PATB stated,

> …sometimes it was difficult to come to the clinic because I didn't have money to take the bus…because sometimes, like I said, I couldn't walk too much…it made me too tired and I didn't have money so my mom and [wife] had to sort it out as best they could to bring me in a taxi…

These financial challenges were perceived as a greater barrier in regions with more poverty, more transient populations and/or high rates of seasonal employment, such as the

mountainous regions of the north. In one region with such a population, a health care provider found that financial accessibility for people registered with and receiving treatment from the program was tied to seasonal employment, stating:

> …the majority of times, the poor things, they [PATB] don't come to their appointments because they don't have any money when there is no work… during the coffee harvest, the time when there is more money, it's not so bad for them…

Through observational opportunities, the researcher visited the homes of two PATB. The homes were found to be difficult to access: both were at least a fifteen minute walk along a path away from the nearest road and at least fifteen minutes further to the health centre by either car or bus, or approximately one hour walking distance. The cost of transport from the nearest road or highway to the health centre was approximately 5-10 *cordobas*[56]. In the regions where these homes were observed, transport to and from the health centre would have made up between one quarter and one half of a full day's salary. In both homes visited, this daily salary supported a family rather than just one person.

Most participants in the clinical and PATB groups felt that it was common for people to spend time seeking care in either the public or private sector before referral to the NTP for diagnosis of TB. This pattern was often associated with additional costs for examinations, medications and service fees charged by private physicians for consultations. Two interview participants noted that they often encountered cases of TB when working in either public or private not-for-profit health services outside of the NTP. When asked how cases were detected by the NTP, participants in both the administrative and clinical groups commonly identified a number of points of referral through both public and private (for-profit and not-for-profit) services including various NGO-run health centres or hospitals, private clinics, the social security system or other departments of the public health centres or hospitals. All participants in the PATB group had been ill and seeking services outside of the NTP for a minimum of two months before referral or diagnosis with TB. One participant described his experience, before being examined for TB, in seeking treatment, stating that he'd spent a year seeking services and buying or receiving medicines:

> …Ultimately, when I first was sick, I never thought that I had something like this…but nobody ever said anything about it to me…first, I simply

[56] *Cordobas* are the national currency—approximately 17 *cordobas* is equivalent to one Canadian dollar

> had this cough…I started and went out looking for where I should go…where, where? Because I looked and looked for medicine and I didn't find anything that came even close to helping. I spent a long time looking for someone…Uh! It was a good long time with this cough and sweating and the cold that I had. I looked and they gave me medicine, but it didn't help. No one had done an [exam] on me…
>
> *Researcher: So you spent more than, say, a month looking?*
>
> …No! More than that…almost a year! A good amount of time, I lived with this cough and there I was. And sincerely, I don't know how without God. God helped me, he gave me calm and helped me, he made me come here [to the NTP]…because I didn't know how or where to go…but before, because I have insurance, I have…receive some coverage…but there they don't give this [medicine] out…it seems like they don't think about this [TB]. They simply give a little bottle of something to calm the cough, nothing more…but, sincerely, it wasn't good because I didn't like any of the medicines…sometimes they made me worse…

4.4.4.3 Cultural Accessibility

Cultural accessibility encompasses non-geographic and non-financial factors, such as taboos, beliefs and understandings influencing a population's access to a particular program or service (197). This definition of cultural accessibility encompasses a wide range of factors that may not necessarily reflect cultural dimensions alone; but incorporates issues that are social and structural as well. Despite the 'catch-all' nature of this definition, it captures well the multiple dimensions that reach beyond geographical or economic accessibility.

Social stigma against TB, general knowledge and awareness about TB and the reputation of the public health care system were complex issues identified by most interview participants and during several participant observation opportunities. In several instances, fear of the stigma against TB was felt to impede the likelihood that someone experiencing TB symptoms would seek services. Several participants reflected on the how stigma, rejection and isolation they felt was directed towards the fact that they had TB. One family member of a PATB didn't like anyone in her community to know that they had been affected by TB and said, "…we almost never like to talk about this because everyone always rejects you…". This stigma and rejection were sometimes considered to be too great to outweigh the benefits of being diagnosed so that even when people thought they might have TB, they resisted seeking diagnosis and treatment. Many people commented that the fear of

losing their job was an additional disincentive for seeking care. One health care provider commented

> …after, when they are diagnosed…their rights are violated because, look…for example in the case of these three people that we have in the free-trade zones, it seems to me that they should be getting their salaries. But they've told me that they haven't received a salary…[worse still,] they are always four months behind on salaries…so this is a violation of their rights. And once they have the disease, they [the owners] say, 'Now we don't want to have them here…it's better that they go because they could infect someone else'…

Many participants identified stigma against TB among health personnel, a less direct but nonetheless important factor in cultural accessibility. Most participants felt that health personnel outside of the NTP demonstrated stigma and rejection against TB. Many participants suggested that this was due to a lack of understanding and education about TB, but that it was also a culturally defined stigma that was also carried health care providers. One participant commented on the challenges they face in improving the cultural accessibility of the NTP:

> …the TB clinics are generally in the very back of the health centre as though they were some kind of clandestine operation…something illegal…but the truth is that we're trying to change this attitude of stigmatization…because once a person has tuberculosis it was as though they had put a sign on their forehead and everyone would stay away from them…nobody wanted to be near them…and the neighbours would identify them…we want to change all of this and we're doing it through training…

Despite efforts at increasing awareness and understanding around TB, the existence of stigma among health personnel outside of the NTP and administrative personnel within MINSA was perceived as an on-going challenge. One health care provider commented that discrimination against TB and other infectious diseases was a common barrier to the initial access of public health care services. She shared an experience she'd had in a health centre that she felt illustrated the extent of the discrimination that people face when accessing health care services (this time in relation to HIV):

> …there is a lot of discrimination…even from health personnel…I [recently] had an opportunity to see a patient with HIV. He was sitting in the emergency waiting room…he had come because he was having tremendous abdominal pain. And the nurse came along and one of her

> nieces was waiting there right then and when the young man stood up from his chair…then the nurse said to her, 'don't sit there!'…the nurse said to her niece. So I said to her, 'I hope I didn't hear you right'…because there are so many people who I've not said this to, '…it surprises me that you're behaving this way,'…because she needs to understand that AIDS doesn't get passed around because someone sits where a person with AIDS sat…and it hurts…like I told you, it's like a punch in the stomach, man! A nurse, and she treats you like this! Just because the patient sat there, her niece couldn't sit there! It makes me so sad, I tell you…

The presence of discrimination among health care providers was compounded by the poor reputation of public health centers. Study participants in all groups mentioned challenges in cultural accessibility related to the reputation of public health services in general. Public health centers and hospitals were seen as places where service is slow, poor and ineffective. Many participants felt this reputation played a role in people's tendency to wait until they were gravely ill before 'resorting' to using public health services. One PATB felt both the stigma against TB and the reputation of MINSA were why people in his community did not want to go to the health centre:

> …[they don't want to go] because they are ashamed and embarrassed and some because they don't believe they have it…they have the symptoms of TB, but they don't believe that it could be TB…they don't accept that they have TB…so they don't come here…they wait with the disease until they are gravely ill…

When asked who people go to when they are looking for health care, one participant in the clinical group identified *curanderos*[57], or traditional healers, as the first choice for care and private clinics as second. The participant implies that two barriers are affecting accessibility to the program: the Ministry of Health's poor reputation and the cultural belief that if you're sick and see a doctor, then you should get a prescription for medication:

> …First, [they seek care from] the *curanderos* because…why? Because, look, it's that we have, the Ministry of Health has a bad reputation…really awful…worse now after all of these months without working. So, unfortunately, we have a bad reputation. What is the bad reputation? That you're not going to be attended to, that you're going to wait all day, that they're not going to listen to you, they leave you there…that they send you for exams and they won't do them for you…for which we don't

[57] The singular form of *curanderos* is *curandera* for female traditional healer and *curandero* for male traditional healer.

> have cash to pay. It is the waiting too. So they go and put their faith in the *curandera*…they believe in her. First, to the *curandera*, and then to the private doctors…they self medicate. They send them to buy [medicines]—aspirin, penicillin, a cough syrup…whatever… then…you could go and say, 'I have an infection' and they'd say, 'Here you go!'…"

Issues of cultural accessibility are complex and cannot be directly measured. In telling his story, one participant illustrated the complexity of the issues related to stigma, culture[58], knowledge and understanding of TB in both the general public and health care providers, and the reputation of public health services. This story captures the essence of what the 'struggle' against TB is like in Nicaragua and highlights the general resistance to seek care, particularly from the poorly reputed public health sector. I heard similar stories from almost every PATB I spoke to in both interview and observational settings.

> …when my wife had to lift me up from the bed, I gave up right then and there…I had nothing left in me, I felt like my lungs were exploding on me because I coughed up a ball of blood. She helped me…she had to lift me up quick because I couldn't do a thing…
>
> *Researcher: Why didn't you go to the health centre sooner?*
>
> …we always would go there, you know…we'd never heard of the treatment for this disease…that there was a treatment for this disease…like it had never been declared an outbreak…I only heard the things on the radio, but they never said in what part of the country…they'd never talked about it. My wife was the one who realized that there was a woman here who was taking the treatment and had been cured and got better. It was from then on that [my wife] started to listen to me, or well…[thinking] that I was having the same thing…[my wife] brought me [to the clinic] and was saying to me, 'they will tell you what to do'…but what was I going there for? I was already dying. 'So that you bring this,' [the nurse says to me,] 'no, you need to do a sputum exam,'…so, I took it to her. This is what made me go and give the sputum. But I didn't want any of it…none of it! [I thought,] 'All they are going to give is a handful of papers and then tell me where to spend my money...' And I'd struggled [with this cough], I'd taken the medicine from the doctor…I'd taken malaria treatment…nothing….I kept getting sicker…they told me, buy more injections…but somehow I escaped death. Not one thing worked for me…this is how I ended up with the treatment [for TB]…

[58] The culture of *machismo* is one factor that may be influencing the reluctance of many PATB to seek care during the early stages of disease. It is beyond the scope of this thesis to address such subtle and complex issues of cultural accessibility; however, it is an interesting point for further exploration.

Many of the GFP activities applied at a national level (rather than activities targeted at the seven prioritized health regions) are related to improving cultural accessibility, including activities aimed at increasing awareness and engaging communities. Two of the five main program objectives outlined in the Grant Agreement identify some form of education, training, or community engagement that have the potential to improve cultural accessibility to the NTP. The first project objective is to strengthen inter-sectoral actions in the application of DOTS with community participation within prioritized regions. This particular objective identifies the implementation of community DOTS, based on the training of community volunteers in the DOTS strategy, as its primary activity. The promotion of behaviour change is another key objective, based on increasing recognition of TB symptoms and awareness of TB treatment through public education and information campaigns (41).

Several participants in the administrative and clinical groups mentioned the public education campaigns, TB Clubs and the expansion of Community DOTS as aspects of the GFP that were helping to improve general awareness and knowledge of TB. The public education campaign included printed educational materials and advertising through posters, radio and television. The efforts were perceived as effective in improving general knowledge and awareness of TB, though some participants felt that the results were short-lived. One participant commented,

> …the campaign on television helped so much…after two months this had a big impact and helped the population. It's a tragedy that it didn't go on for longer…

Another participant felt that the same television and radio campaign had significantly improved the population's awareness of both TB and the availability of treatment for TB for a short period of time:

> …the majority of the population don't [know about TB]…just those that have some family member, then they know. The other time they were putting an announcement on television, so then they were coming a lot. But when they stopped putting it on…
>
> *Researcher: When they stopped this announcement on television, what happened?*
>
> …when they stopped putting the announcement on television, lots of people were coming. Lots of guys and young people…were coming…but now, no…it's as though they've forgotten. But there were even lots of fat patients coming, that only had a cough and came to have

> a [sputum] exam done…yes, they were thinking [of TB]. Some really fat guys even came to have their [sputum] tested because they had a cough[59]. There was a lot of good result from this announcement that was on. It was some five months ago…

The networks of PATB built via TB Clubs at local levels provide a potential to increase cultural accessibility to the NTP. The TB Clubs were described as community networks that brought information about the availability of free, accessible treatment for TB closer to the community. One participant in the clinical group described how she used the TB clubs:

> …there is something beautiful that I have in this. I take a lot of advantage of the TB clubs because I'm an opportunist! Because I also said to them, 'every person that you see with a cough and that have these same malaises that you had, please bring them to me, or send them to me, or make me a little piece of paper or just tell them to come look for me…that's it. So with them, I have a big network…because, what is more effective than this network?

The sustainability of the efforts being made through the GFP to improve accessibility of the NTP is dependant on a number of factors. A participant in the administrative group commented on the potential for both these TB Clubs and the public education campaigns to improve accessibility to the program, framing it in the context of long-term sustainability:

> …the promotion that they are doing on the Global Fund, all this theme of communication, of raising awareness and all of this…depends on the local level, how they are going to promote and what kind of relationship they have with the communities. Because it's always the same, if you have moral and technical authority and the people accept you as a doctor, as a nurse, and they appreciate you, accept you, then when you see patients in the waiting room and you say, 'everyone who has a cough for more than 15 days, please, this and that, it could be tuberculosis…then the people are going to listen to you and are going to accept you…but if you have a bad reputation, your promotion isn't going to help much, right? So, everything goes together, right? But I believe that yes, the investment, because they are making a strong investment in promotion, is very important but it has to be a sustainable promotion…if you only talk about this for one day, one month later the people forget about it…it has to be something sustainable. So, there we're talking about the sustainability of a large project. If, after five years, it falls to a minimal level it could be that it loses much of its strength, but the local personnel

[59] The incidence of TB is associated with malnutrition (see: Schwenk, Achim; Macallan, Derek C. Current Opinion in Clinical Nutrition & Metabolic Care. 3(4):285-291, July 2000.)

> continue to create awareness among the population, that's good, much depends on this commitment, right—at a local level…

The expansion of the NTP strategy to encompass Community DOTS builds upon the network of voluntary health workers, *brigadistas*, and community leaders to include TB testing and directly observed supervision as part of their skill-set. This expansion affects geographic, financial and cultural accessibility by bringing more informed services closer to the communities in which people are living. One participant felt that this component of the GFP was one of the greatest strengths of the project, stating,

> …The biggest [thing] has been the drive for Community DOTS. We didn't have the opportunity to have either financing or implementation of this strategy. It's new…we don't have experience with Community DOTS. So this we're starting up. For this, we've sent people out, people from the SILAIS, to do internships in countries that have experience in community DOTS, like Bolivia, so that they help us, support us get the knowledge we need…

Another participant emphasized the potential to fill an existing gap in program accessibility through Community DOTS:

> …So, then, this work is giving training to the community leaders so that they apply DOTS in the communities where the ministry of health doesn't have a presence or their presence is limited because of the inaccessibility. So, in the sense that yes, I'm a patient or a person with TB and I live in the village…to have access to medicine…I train you…or a health professional trains you….so that you bring the medicine to where you live. And, not just give the medicine, but know the adverse effects of medication…and to also know how to identify respiratory symptomatics in the community…and refer them to the nearest service….to the health posts or health centres…

4.5 Health Systems

For the purposes of this study, the identification of health systems as a key theme area was intended to elucidate issues and experiences related to the impact of the GFP on the movement of health personnel within or between the public and private sector, collaboration or coordination with the private sector and on other health initiatives, such as maternal-child health, immunization and nutrition programs. The research questions under this theme attempted to explore these three potential areas of impact from the GFP, though

study activities found issues related to health systems included issues outside of these three areas.

How have resources and efforts aimed at addressing issues related to private sector coordination and collaboration been affected by the GFP?

The private health sector plays an important role in health services in Nicaragua. Both profit and not-for-profit private services were commonly identified as first points of contact with health services. The development of private sector services must be considered within the context of the history and development of health services in Nicaragua as a whole, as described in Chapter 3. Historically, the NTP has operated within the public sector as an independent program (184, 188-190, 198). The use of the DOTS strategy in the NTP does not necessarily imply engagement of the private sector (111); however, the process of applying and securing program financing through the Global Fund challenges national programs to consider the impact of, and need for, engagement of the private sector. The engagement of the private sector is highlighted in the Global Fund Framework and the Proposal Guidelines as one of several components to be included in 'successful' proposals.

Though engagement of private and other public sectors was not mentioned among the original program objectives of the GFP in Nicaragua (41), all of the health regions visited by the researcher were attempting to involve private practitioners in training and educational events related to TB. Both the tendency for individuals to seek care outside of the public sector and the use of passive case detection in the NTP imply a need for cooperation and collaboration among practitioners and workers outside of the public health system. Effective passive case detection, the strategy promoted under DOTS, requires that practitioners providing first-point-of contact care (regardless of their location in public or private settings) are (a) aware of the NTP, (b) able to consistently identify signs and symptoms of TB, and (c) willing to rapidly refer patients to the NTP. Interview participants affirmed each of these points as the most common ones related to private health services.

4.5.1 Seeking Services Outside the Public Sector

Several participants, notably in the clinical and administrative groups, stated that individuals generally preferred to go to the private sector as a first choice in health care services. One participant explained that,

> …the majority of the time, they [PATB] spend time outside [the public sector]…they go to the *curanderos*, they go to the private clinics. Because there, they just buy the medicines and go…

Another participant commented on the routes of access to the NTP, identifying private and provisional clinics[60] as common routes of referral:

> …well, the people come to the program from two ways…because they come [to the public clinic] for a consult because they have a cough…or, they were referred by a private doctor…it's not just the private doctors, but through provisional doctors…or the people who provide service for the social security…so they [PATB] are referred [to the program] from many ways…

Despite relatively limited financial capacity to absorb costs related to private services, each of the five participants in the PATB group had sought care outside of the public sector before diagnosis with TB. During one interview, two participants shared why they felt PATB spent time seeking services outside of the public sector, commenting on the use of a *brujo*, or witch, to get help for illnesses:

> Participant 1: …For example, here there is one gentleman who said he didn't know what is tuberculosis and he went to see the witch, he might be able to cure him with magic, so he went to the witch to see if he could do it....
>
> Participant 2: They were going to take me to a witch…
>
> *Researcher: If you had gone to a witch, what do they do?*
>
> Participant 2: They study you to see…they study their cards…
>
> *Researcher: And then?*
>
> Participant 2: They can give an herb, medicines. If they are intelligent, they can make some money, get some money out of the cure…but, I don't believe in the witch. It's that the people often ignore the disease, so they've all gone to the hospitals already, so they're going to look for a witch.
>
> Participant 1: It's because they feel like they [the hospitals] don't cure you of anything…
>
> Participant 2: They [the hospitals] gave me prescriptions for everything…they gave me prescriptions of…I don't know what…a ton of medicines…

[60] Provisional clinics provide services for those individuals insured under the Social Security program, an insurance program offered to and paid into by government employees

Another participant's comments highlight both the ongoing need for greater public awareness of TB and the poor reputation of public health services. The participant expresses her consideration of private sector services as being better than public services and the desire to provide the best to one's family as the reason for seeking services in the private sector first:

> …it's that, what happens at first is that one can't say…one can't guess, right, 'I've got this, I'm going to go directly [to the NTP]'. And, at least at first, when you have [financial] possibilities, you want the best. At best, if I come here to the centre, they'll examine me and all they're going to give me is an acetaminophen. And in the private centres, maybe they'll give you a prescription. But perhaps sometimes they say, 'I'm going to go to the best', because [at the public centre] they give me a prescription and I'm never going to get better, but in the private [clinics] they're going to send me for exams, they'll get me to do this one and the other and so sometimes it turns out better because there you see at least…an example: a person comes with fever and all of that, here, I say, 'What can the doctors do for you?' it's like this—examined and things and already they say to you: take this acetaminophen. This almost never goes over well, in general it doesn't go over well. And so, it's better to just go to the private [clinic]. At least in our case, we went to the private [clinic], but they don't give treatment there…the ones who give treatment are only here…

4.5.2 Cooperation and Collaboration with the Private Sector

Participants in the administrative and clinical groups frequently commented on collaboration with and cooperation from the private sector as key factors for successful case detection. Many participants felt that small, positive changes in the NTP collaboration with the private sector were one result of the efforts made under the GFP. Others felt that this collaboration was an area in which the NTP still needed to develop. One participant felt that the GFP was a starting point for engaging the private sector, among other multi-sectoral actors:

> …So, there is an awakening…but…before, it was very few private doctors that transferred patients with respiratory symptoms to the care [of the NTP]…they are starting now…it's not a strong participation…but yes, they are starting to work with people who before…didn't work with the tuberculosis program…So, they are training the students in the universities[61]…they are training the government…the regional

[61] Note that the majority of physicians in Nicaragua practice in the private sector, either exclusively or as an augmentation of their practice in the public sector

> SILAIS…they're in some municipalities…giving presentations about the TB situation in each of the municipalities…

Another participant commented on the exclusive availability of TB treatment through the NTP as a strength for the program. The participant highlights the benefit of and need for the CONAPAT, a collaborative committee engaging public and private sector representatives that is supported in part by the GFP:

> …We have an advantage as a country and it's that it is only the ministry who manages the treatment schemes…they don't sell them in any pharmacy….and because of this, we don't have much mismanagement of patients in the private sector. So this is the great advantage that we have. But, at the same time, we've been able to engage a sector of Nicaraguan society that is in the private sector, which is the Social Security [program], that bit by bit is strengthening little by little in the collaboration between Social Security and the Ministry of Health. Why? Because, the Social Security [program] is part of the CONAPAT and they don't offer treatment. So, every patient, although they're managed like an insured individual, must go to the ministry to receive treatment. So, there isn't any clash with the private sector…

One participant felt that the collaboration between the NTP and private sector actors was not as strong as it should be:

> …Speaking honestly, it's not as good as we'd like. What happens is that they [private practitioners] think they're being forced…to not have access to treatment, to have to refer to the Ministry of Health, so…it's not that there exists a very strong coordination, but they think they consider themselves obligated [to refer]…more than anything for this. Because, at best, they would have the treatment and perhaps they wouldn't do anything, but seeing as how they don't have it and it isn't in the pharmacies, then there is no option other than to send them (TB suspects) to the Ministry of Health…

Another participant expressed frustration over what she felt was a lack of collaboration between the NTP and the private sector:

> …there, nothing has changed…at least in [this region] it's the same…the [social] security on one side, the provisional clinics on another, and the Ministry of Health on the other. At least no one has come to me to see if we could coordinate…I imagine that there will be some communication within the committee [CONAPAT] that there is on a central level with all of them, but they're [the CONAPAT] not going to go to all of the SILAIS…no…

4.5.3 Private Sector Awareness and Knowledge of TB & the NTP

There was little agreement over the extent of private care providers' awareness and knowledge of TB and the NTP. Some participants felt that awareness existed, but that private practitioners chose not to immediately refer patients to the NTP. Other participants felt that the level of knowledge and understanding of the disease and its treatment program was low. One participant felt that the training provided in medical schools and in the first week of their orientation as interns in a social service placement contributed to physician's general knowledge about TB and the NTP:

> …In the universities, there is a class called 'Society and Health' and another called 'Hygiene and Epidemiology' where they talk to them about the program…during the [theoretical]/formational period. And later, when the guys finish and go to their social service…go out as an intern, all of the Ministry programs are going to give them presentations about the programs. They spend one week in training and then they go to the sites they're assigned. And in each SILAIS, in every one of the departments, they participate in these trainings…

A participant in a regional administrative role commented on their efforts in building collaboration with private sector actors:

> …for example, with these workshops that we put on, already I have done at least two workshops…with the inter-sectoral aspect, they help us…for example, the MED[62]—we've already trained the MED and there are sectors where they're seeing children…a young person is with a cough, they send them to the [public] health centres. The knowledge makes it so they capture [respiratory symptomatics]…

One participant felt that the lack of knowledge and awareness among private practitioners was leading to misdiagnosis of individuals with active TB and felt that some form of outreach to the private sector is needed:

> …well, in the first place with training of health personnel, [the lack of awareness] is an important factor. Here, I would like to involve the provisional clinics, the private clinics…It seems to me that we have a little bit of a problem in the private clinics…we should sit and make a program…to make a small project with the provisional clinics. Why am I talking about this? Because, it's true that the Global Fund helps us, supports us…but, here we need to be registering patients that are from the provisional clinics, private clinics and these patients have been misdiagnosed in the clinics. For example, we have one [woman] that they

[62] A group of private practitioners offering services in a for-profit setting

> diagnosed with a laryngeal cancer and when she came here, we did the sputum exams and it was a pulmonary tuberculosis and they had told her that it was a laryngeal cancer! So, it seems to me that the training of the provisional clinics is lacking…

Most participants in the PATB group had invested money in purchasing medicines and examinations not related to TB. It cannot be definitively determined if this is due to a lack of knowledge about TB or a lack of willingness to diagnose individuals with TB. Some participants felt that it was a combination of both, while others felt that the loss of income related to referring a patient to a free, publicly provide service was a disincentive for private practitioners. This is discussed in more detail in the following sub-section.

4.5.4 Private Sector Willingness to Refer Patients to NTP

No practitioners providing exclusively private services participated in this study. Additionally, data are neither available on the routes of access used nor the time spent seeking care before diagnosis among patients registered with the NTP. There was agreement amongst participants, however, that inconsistencies exist in the tendency of private practitioners to refer suspected TB cases to the NTP. These inconsistencies are illustrated by both the stories shared by participants in the PATB group and concerns expressed by clinical and administrative participants over private sector's willingness to refer to the NTP. Some participants felt that private practitioners did not immediately refer suspected cases of TB to the NTP because of the potential loss of income. One participant explained,

> …the private doctor never thinks of TB as a primary pathology; and, despite the fact that the private doctors are the same doctors, some that are from the [public] hospital. You know that from the economic side of things, if you detect [TB] in the first consult, then you're not going to come for a second consult…but, because it is something voluntary, of conscientiousness, of awareness…that the doctor has to say, 'this case, from how I see it, is a tuberculosis'. What they are doing is billing and billing until there's nothing left, then he said that it was tuberculosis or that now the same patient didn't have [what they thought it was] and had to go to the health centre and there they detect [TB]…

During one interview, two clinical participants shared their experiences with referrals from the private sector and reflected on why patients might be spending so much time in the private sector before referral:

> Participant 1: For example, I have one who started [with the program] just a short time ago and spent six months going from doctor to doctor, until one doctor from here, that works in the private [sector], and he captured it. He sent her here and he was the first to send her and it [the sputum exam] came out positive…
>
> Participant 2: But, yah, this happened to me with two patients, one spent three months and then realized that he had the disease and the other has six months too…they spent six months before they realized what it was that they had…
>
> Participant 1: I don't know why the doctors don't suspect [TB] in the moment...
>
> Participant 2: More in the private [clinics]…
>
> Participant 1: In referring them [TB suspects]…they don't have any work and so they try to get as much as they can out of the person, of maybe because they want the person to be coming back every time to get more of their money…I don't know…

Another clinical participant provided a poignant, concrete example of unethical medical conduct by a private practitioner with a patient newly registered in the program at the clinic she worked in. As she looked over this patient's file, she commented on how a particular private clinic managed a patient:

> …one patient that started [with the program] in these last couple of days spent two months [in the private sector] before they transferred him here…what happens is that in the private sector, they don't come [here] until they [the private practitioners] want them to. Look, in this case, they did the [sputum] exam on the 15th of December! Yes…these are sputum exams…all of these sputum exams, look…they did them. And here is the X-ray. Here is the X-ray…with the X-ray I'm going to tell you…19th of December and the patient came here to register on the 24th of March. He came from [a private clinic]. They'd had the results since December and it wasn't until the 24th of March that they sent him to me. Since December, they've known more or less that he was a TB patient…doing whatever exams they say, exams and exams…since December didn't they send him to me!

What effect has the GFP had on the movement of health personnel between public and private health systems, if at all?

This question was developed with the intent to explore what impact, if any, the GFP was having on the movement of health professionals between public and private sectors.

No participant in either the clinical or administrative group felt that the movement of health personnel between public and private sectors had been affected by the presence of the Global Fund. Within the NTP, most participants felt that there was much stability at the regional and central levels and less at the local, clinic level because of a MINSA policy to rotate nursing staff between programs. There was agreement among participants in this group that physicians practicing in the public sector, more so than nurses, maintained some type of private practice as a way to supplement their salary. Some participants felt that, in general, the higher salaries offered by the private not-for-profit, or NGO, sector were an attractive draw for personnel practicing in the public sector. One participant commented on the gravity of the salary situation for health personnel in Nicaragua:

> We…the health personnel…of Nicaragua are some of the poorest paid in Central America…so, for this many times it's common to leave the system to work for an NGO…or clinic…because they pay better…but it is a ton of work. Well, it doesn't matter to me that it's a ton of work. The truth of the thing is that this satisfies what you need…or, well, at least so that you have enough to get you water and beans!

Another participant reflected on the tendency of health personnel to move from the public sector into the private sector. The participant did not connect these trends to the Global Fund, but rather to the context of a fragmented health care system in a country with more needs than resources. The issue was explored within the context of a complex health sector with multiple private for-profit and not-for-profit actors, low salaries for health professionals and general trends for migration to Costa Rica, Belize and the United States. The participant felt that the migration of health professionals away from Nicaragua affected resource distribution and quality of services within the country by leaving areas with fewer professionals with less experience. The lack of resources and investments in continuing education were felt to further complicate this issue. Other study participants in both the administrative and clinical groups similarly expressed issues related to the movement of health personnel as contextually defined, rather than as direct or indirect impacts related to the presence of the Global Fund.

What effect has the GFP had on other health initiatives?

The GFP brought a large sum of financing into the low-priority publicly provided NTP, one of several programs under the package of selective primary health care maintained

by the Chamorro government following the elections of 1990. This question sought to examine the effect of the GFP on these other programs in terms of prioritization, collaboration and coordination. The fourth program objective of the GFP, outlined in the Grant Agreement, identifies an increase from 0 to 25% of HIV-positive patients receiving chemoprophylaxis as one of four key indicators for the strengthening of preventive TB actions (41). Accordingly, interview participants in the clinical and administrative groups frequently felt that coordination with the HIV/AIDS program had improved as a result of the GFP. This coordination was facilitated by the organizational structure of regional health authorities as well as the nature of the project proposal, which addressed each of the three, targeted diseases in one proposal (41). It was observed that regional-level administrators were commonly responsible for both the NTP and the newer HIV/AIDS program. Where this wasn't the case, the person responsible for the NTP shared office space with the person responsible for the HIV/AIDS program. One participant felt that this coordination was a particularly important advancement realized through the GFP:

> Really, we've seen a strengthening in this coordination that we've achieved between the HIV/AIDS and tuberculosis. We've learned how to train about these two diseases together. It's not completely come together yet, but still we talk about the HIV norms and the tuberculosis norms that touch on both themes. The management of this type of patients, yes…I believe that this has been another important element in which we've managed to advance as a project…

Another participant felt there was both potential for the GFP to improve collaboration and risk for the project to restrict time and attention given to other programs:

> …When there is a program with strong financing there exists, of course, the threat of this disequilibrium at a local level in the relationship between programs, because if there is a lot of pressure for just one program to execute its activities this can [result in] less time…less human resources given to other programs, in this sense it can be a threat. But, it might not be because at a local level, if as a manager or director you are can assimilate well in what you do daily, it won't have an affect. But, if other programs really benefit from the Global Fund, yes…it may be because…the Global Fund provides financing [for supervisions] and as a nurse, and seeing as how I the distances are long and difficult…and because of this, quite costly…because the nurse is the one responsible for the two programs, she supervises the two programs with the same fund, so, she takes advantage [of the opportunity]. I think that a good manager, a good director can take advantage of these funds…can take advantage [of them] for other activities…

4.6 Health Rights

The exploration of health rights in this study employed the use of a visual cue to prompt participants to consider internationally acknowledged factors comprising the right to health as described by the ICESCR (199). A copy of the card used to prompt participants can be found in Appendix D.

How are the factors listed in ICSECR related to vulnerability to TB?

The factors listed on the cue card presented to interview participants included: food; housing; access to safe water; adequate sanitation; safe and healthy environments and working conditions; the right to control one's body and health; the right to timely, accessible, equitable and appropriate health care services and facilities; and the right to non-discrimination. All interview participants felt that the factors listed on the cue card were relevant to the population's vulnerability to TB. Participants in all groups described the Nicaraguan context as one of extreme needs and that many PATB shared characteristics of poverty, malnutrition, inadequate and/or crowded housing, limited access to water and sanitation services and crowded workplaces. Several participants made narrative connections between severe underemployment or under-paid work, poverty, the tendency to migrate or move to urban centres, and alcoholism or drug addiction. One participant described the extreme conditions and socioeconomic challenges one particular patient lives with every day:

> …there are some that have their job and live so-so but there are other patients, for example the street venders, they live in terrible conditions. There are some houses that have walls of old zinc, made from old signs and tables. This guy who [was here] with the bandana, you'd see how horrible it is where he lives. They are really poor. And the conditions that they live in, you'd see, in a little house but the house is really a tiny room…everyone crammed in and the roofs are made of tables and zinc. And this guy that just left, that I told you had been drinking, you'd see how horrible. There is one part of the house that doesn't have a roof, another part of the house is made completely of metal signs and when it rains, this is going to get wet and inside the house is horrible…he lives with two seniors, little old people. And because of this, he didn't want to go [to the hospital for treatment] because he said that he didn't want to leave the two seniors and he just lives drunk…until he's face down on the ground. One day, he was hit by a car, the other day dogs bit him. And this guy is educated…

Another participant felt these factors were a 'recipe' for a TB patient:

> …there are the factors of poverty…of inadequate socioeconomic situations…and socioeconomic problems…poverty…the lack of adequate nutrition…and so…access to services, it's limited the access to services…well, there are the factors specifically geographical! Yah, they're…one day, two days walk to go to a health post…so, the majority of people who become sick with tuberculosis…and within these factors, one part of this, is drug addiction and alcoholism…so, all of these together make a TB patient. These are the ingredients to fabricate a person with tuberculosis…

The combination of extreme poverty and high unemployment were felt to contribute to instability, uncertainty and migration among populations vulnerable to TB. One participant commented on the impact of deplorably low salaries on migratory trends of workers seeking employment in Costa Rica:

> It troubles me because, you know how many Nicaraguans go to Costa Rica. The poor things…they go and live better. In our country we can't live in peace. To work, to make a dignified salary…there is none of this…[the salaries] are incredibly low. Did you know that with the cost of living, the people from the farm make C$22.00[63] per day right now…per day…really, it doesn't amount to anything…but I don't know with how much the poor people are sustaining…

One participant expanded upon the extremeness of the country's needs related to housing:

> …the theme of housing is a very big priority in Nicaragua. There is an estimation that says that there is a lack of approximately six hundred thousand houses. It is quite large. And the problem is that there are no projects or funds, at least for the moment, perhaps more in the future, to be able to produce the quantity of houses that are needed. So, really, in the case of tuberculosis, I know that every one of these factors is involved…and it follows that the Global Fund could, let's say, contribute to some of these aspects…

Some participants in the clinical group expressed a sense of helplessness when asked about the complex social, structural, expressed and environmental determinants of health illustrated by the cue card:

[63] C$22 is equivalent to approximately $1.30 CDN. According to the Central Bank of Nicaragua, the basic monthly cost of living for a family of four (including food and shelter) was estimated at C$2810.10 in January 2006 (http://www.bcn.gob.ni/estadisticas/inflacion/9.pdf). This estimation means that a family's income must be approximately $C108 daily (assuming 24 days of work per month).

> But the majority of the people that I've had the opportunity to treat here are people who are completely unprotected…some don't even have a house and this is something that causes you [foreigners] a lot of pain…and you say, 'Ah! I give my time!' and I say 'how is it possible that these people can survive?' I've gone to places where there is only a kind of awning that one makes out of plastics and there isn't anything but a single bed for the whole family. The patient is laying on the bed and the rest of the family, I start thinking to myself, 'where do they sleep?' These are things that you see here.

Another participant in the clinical group made a passionate comment about the context of poverty, helplessness and its affect on the people she provides care to:

> …I've always thought, 'I'm from a family that also comes from a very poor social strata. When I was little, we cut coffee with my family…and because of this I have a lot of affection for the people. I'm not obsequious to people who have money. No…they can go where they want, if they want to go to the [United] States to have their operation, they can go…go where they want and then they die because really, they couldn't defeat death…but the poor Nicaraguans die of hunger, they die because of a lack of a ton of things…sometimes the lack of caring, of understanding…

How has the presence of the GFP had an impact on the fundamental right to health?

The support documents providing guidelines and information for the submission of a proposal both directly and indirectly promote the consideration of health rights in project development. Both the Global Fund Framework and the Proposal Guidelines imply the promotion of factors related directly or indirectly to health rights (see Appendix G). There are no specific references to health rights in the Program Grant Agreement between the *NicaSalud* and the Global Fund, though the strengthening of health services for an endemic disease engages one aspect of the right to health.

Some interview participants in the administrative group felt that the connection between health rights and the GFP was not relevant because neither the Global Fund nor the NTP contemplated determinants of health in the approaches they employ. One participant stated:

> …although [the Global Fund] respects the project directed at these three diseases, many of these things [factors in health rights] that they consider are neither contemplated in the project objectives nor in the

> strategies…the only thing that we are doing is to strengthen the diagnostic capacities [at the] local level and the technical capacities of the personnel that are there. So, logically, people's access is easier because they don't have to go to the [health] unit further away when they have one there, closer. But it's not that we're improving in all of the conditions that [contribute] to develop the disease or not…

Another participant felt that the Global Fund is not intended to address structural issues related to health rights; however, the GFP provided a temporary assistance in addressing health rights through the distribution of food packages:

> …perhaps in the food packages, they could help, right? Here, but of course, it is temporary because…the theme of hunger, the theme of nutrition is a structural theme. A theme of injustice and many other factors, no? That they influence it? The Global Fund can't…it doesn't work in this theme, so the food packages for me are a double-edged sword because, on one hand it helps you to maintain your patient and help them economically with food…to recover more easily etcetera. And temporarily, they receive this assistance. On the other hand, if tomorrow the Global Fund comes to an end, the government is going to...would have to continue giving food packages to the patients. Maybe then, they don't give them…so then you stop a stimulus, an incentive that they've given for several years in some places and this could have a negative effect, no? Because you have to work in the structural problem…that of poverty, no?

Several participants offered suggestions around how they felt the Global Fund could contribute to addressing the many structural and social determinants of health that are affecting population vulnerability to TB. One participant felt that the support and development of TB clubs could be a base from which health rights could be addressed through community organization and development:

> …to work in the theme of health rights, you first need to work in the theme of community organization, because people who are organized will make faster progress with their rights than people who are not organized…we in one health centre, we're working in one of these themes, right? It's important that…for this I say that it is important that they could think of working in the them of the patient associations [TB Clubs]…People who are sick with tuberculosis where they can integrate with ex-patients and…that have an organizational space where people who had TB and people with TB can come together and can touch on different themes and see how they can put more pressure on the local authorities, whether it be in health or in education, or in housing…to demand more for their needs…but everything starts with organizing the

> people, but if you don't organize the people, you don't achieve anything…

TB clubs under the GFP are supported for establishment in prioritized municipalities of prioritized SILAIS. In some cases, these clubs were observed to be active, participatory settings where PATB were engaged in supportive dialogue about their experiences. One club was visited during a celebration of International TB Day[64]. The activity was energetic, celebratory and involved physicians, nurses and PATB and their family members participating in the local TB club. The activity was funded with money was raised by staff at the health centre, rather than by the Global Fund, and demonstrated a high level of local commitment and motivation. This wasn't the case for every TB club observed. Some clubs observed demonstrated much lower energy and did not appear to function as supportive communities.

Participants in each group provided stories or comments on the limited potential for health rights to be realized in the context of low internal capacity to enforce existing legislation. One administrative participant articulated felt that laws existed to ensure the right to health in theory, but they were not enforced:

> …speaking to the right to health…here in Nicaragua, the theme of the right to health is quite complicated. Because…if we look at it from a very formal point of view, that is, from a legislative point of view, right, yes—there are laws. It's to say, this is a problem—to make the laws effective. For example, the political constitution says that all of the citizens have he same right to health care and that the state is responsible to organize this. The [health care] system is a segmented system…dependant on scarce resources…if you don't have resources, you have a health system with fixed resources. So, there is where the idea of rights fails. There are sectors…where there is an understanding that a right is the obligation of the state to provide free services. I believe that in our country this is a dream…

A participant in the clinical group felt that events funded under the GFP, such as the finalization of the study on stigma, offered opportunities to health personnel working in different sectors to hear patients' stories and learn from them. Through raising awareness and understanding, this participant hoped that the discrimination and associated violation of

[64] World TB Day is a day acknowledging the history, successes and future challenges in the global fight against TB, held last on 24 March 2006.

rights faced by PATB could be improved. The participant provided an example of the violation of PATB rights to illustrate their point:

> …It's nice that the Global Fund says, 'we're going to classify three patients with testimonials'…and this also gets to the people, testimonials…that had tuberculosis and were cured and received all of their treatment and that they are good. Now, what is the problem, for example, we had a driver…a driver who worked for an NGO. When they realized that he had TB, they fired him. They fired him from his job. The following day, he went to get his illness benefit and they said to him, 'Ah! You have tuberculosis, no, you get out of here. You had to go apply at the Ministry of Employment'….and it was a hospital that fired him…it was a health care worker…and [then they] said, 'Go, go because you have tuberculosis,' even though the patient had already had around three months of treatment. This is a rejection, this is discrimination. And so the man was left unemployed with three children to maintain. It is one more unemployed person in Nicaragua…

Given the context of discrimination and state of severe need reflected in these comments and through observational activities, it is clear that health rights play an important role in contributing to the challenges faced by PATB. Some participants felt that addressing health rights was "out of the scope" of both the Global Fund and the NTP; however, addressing issues of discrimination are particularly important from the perspective of TB control. If people fear discrimination, even if they are aware of the symptoms of TB, they may be less likely to seek care early. This argument may offer opportunity to encourage continuing and expanding Global Fund activities influencing discrimination, community awareness and stigma. As suggested by one participant, other opportunities for Global Fund involvement in improving health rights may exist through the support of TB clubs that can serve as advocacy networks for improving living conditions and asserting work-related rights.

4.7 Technical and Logistical Experiences with the Global Fund

Participants were invited to explore their experiences with the Global Fund through the specific questions discussed above and through a number of open, general questions. Interview participants were asked what sorts of things they do on a daily basis with respect to the Global Fund and what sorts of challenges or difficulties they've experienced with the Global Fund. A number of common themes emerged from these general questions, from participant observation and from the focus group activity. The integration of these

experiences reveals two broad areas relevant to this study. First, it became clear that participants generally considered the Global Fund grant to be a five-year project. Challenges related to disbursements, flexibility, needs and evaluation are explored, followed by a discussion of the long-term sustainability of the five-year project. Second, the Global Fund as a financial instrument was considered different from previous funding organizations. This chapter concludes with an exploration of a number of pertinent participant insights around the structure, processes and policies of the Global Fund.

4.7.1 The Global Fund in Nicaragua: Sustainability for a five-year project?

The language used to discuss the Global Fund was largely project-oriented. Participants in both the administrative and clinical groups repeatedly referred to the grant as the "Global Fund Project". Some participants in the PATB group had heard of the Global Fund, but did not have a concrete sense of what it was nor did they use a particular name to describe it.

4.7.1.1 Delays, Inflexibility and Evaluation Challenges

Participants in both administrative and clinical groups felt that disbursement delays from multiple levels were a significant challenge for them. Delays from the Global Fund were compounded by delays in moving funds from central to regional levels, and from regional to local levels. Due to pressure to complete activities as scheduled, most participants felt that these delays created intensified pressure to carry out activities in less time than planned. Participants at local, regional and national levels expressed pressure to produce results for higher levels of bureaucracy. One participant reflects on the power dynamic that is created between internal levels of bureaucracy by this top-down pressure:

> …there is a political pressure, there's authoritarian pressure that is top-down, [saying,] "*you* [the SILAIS] have to deliver because *we* have to deliver with the Global Fund…complete the project in due time and proper form", then this pressure also makes it so that the big guy in the world of [international] cooperation eat the small, the little guy is at the mercy of the big. We've felt this on various occasions because if the Global Fund doesn't achieve a certain activity, or use up the money to carry the out [Global Fund activities], usually in trainings, well…it is a priority, but [sometimes] SILAIS were held back in their programming, or didn't complete all of their other activities, because they were pressured to finish things for the Global Fund deadlines…

Another participant expresses her frustration as she describes how the delays have affected her work at a local level:

> Ah, it has a huge effect because, look, in the first place, [the delays] affect how much time is left in the period in which this activity is supposed to be carried out in because, for example, they say to me, 'You have to develop your tuberculosis workshop for the health posts' and I make my request for January, December…for December to January; but what happens? A pile of things, if one is not there pressuring, what happens with this request? They come disbursing the money in, like, June and this was maybe programmed for March. So then later they say to me, 'You have to carry out the activities in due time and proper form', and so, see the problem? Everything gets out of order…but it is for the disbursement…I don't like that, well, aside from the economic politic of MINSA, they make the disbursements super late…and then, when they hand the money over to the SILAIS, they're pressuring them to use it in ten days, and this is inhumane, it's incoherent, it's anti-pedagogical because in the end the people don't learn but they just walk through the door [so we count them], we do it and that's it. And this isn't right! Because what we want in this is that the people learn!

Participants managing the NTP at a local level felt that there was an inherent lack of flexibility in funds received to carry out activities related to training, education and support for TB Clubs, *brigadistas*, or other health professionals in private or public sectors. Centrally mandated Global Fund activities are pre-scheduled and sent through regional SILAIS to local health centres to be carried out in a specified period of time and for a specified number of people. No clinical participants felt they were involved or had participated in the development of these activities. Though clinicians had flexibility in *how* a particular activity would be carried out, they felt there was little to no flexibility in timeline, number of allowable participants or adaptability to local needs. Clinicians connected this inflexibility to an imbalance in meeting needs versus using available resources. For example, in one health centre, clinicians expressed a lack of access to printed educational materials; but felt that they were able to generate enough resources, either through the Global Fund or other fund-raising activities, to support social activities important for the TB club such as having a *"rato alegre"* or "happy bit of time" for World TB Day (held annually on March 24). Another health centre felt that they had sufficient printed educational materials, but were limited by insufficient resources and support for facilitating the TB club. Despite variability between the needs of different regions and local health centres, activities are centrally planned and do

not necessarily reflect the adaptability desired by those who are the most critical link between the program and local communities.

4.7.1.2 Long-term Sustainability of the Global Fund Project in Nicaragua

Sustainability is an issue that arose either directly or indirectly from each interview, the focus group and participant observation. The language of the Global Fund Framework and the Grant Agreement documents imply that sustainability is built into program proposals through the strengthening of capacity, the focus on human resource development and the engagement of communities (13, 41). As discussed earlier, some participants in the administrative group felt that there was potential for sustainability to be achieved through the establishment and maintenance of the CCM and the CONAPAT. Other participants, however, felt that sustainability was threatened by a number of issues with the GFP, one of which was internal capacity to absorb such a sum. One participant felt that the project's sustainability was threatened by the nature of being a large sum over five years and was heavily dependant upon local contexts, capacity, and commitment:

> …they are making a strong investment in promotion and it is very important, but it needs to be a sustainable promotion…if you only talk about this for one day, one month later the people forget it. It has to be something sustainable, so there we're talking about the sustainability of a project that is so big. If after five years, it falls to a minimal level, it could be that much of the effort is lost, but if the local people continue raising awareness among the population, that's good. A lot depends on these commitments, right—at a local level. I'm always afraid of very big projects because I've already had experiences with other big programs, with so much money that they invest, that you don't get the expected results and…why does it scare me? If you work like ants, little by little, and little by little advancing, I believe that it is better this way. With lots of money, sometimes you distort [the reality] of the system…the [public health] system that isn't strong enough to assimilate this…but then, this is my experience. The efficiency of the work of one or of a group is each time more efficient when you have more capacity and commitment. And also with projects, because you don't repeat the same mistakes every year, but if your program is for two, three or only five years, the first years are for making mistakes and later…when you finally get to be more efficient, you don't have any resources left!

The program's precedent of depending on external funds to maintain basic program functions means that after five years, the program will be left with a potentially unsustainable momentum. This is particularly problematic in the context of Nicaragua's history of health

campaigns and the tendency of the population to respond to current health-related propaganda (discussed in more detail in Chapter 5). Further complicating the context is the reality of a country facing more needs than resources and the culture of prioritization, as discussed in Chapter 3. These issues are discussed in more detail in Chapter 5.

4.7.2 A New Financial Instrument with New Challenges

Not unlike other studies exploring the Global Fund (16, 18, 147, 200), Nicaragua experienced some difficulties in adjusting to the policies and procedures outlined in the Global Fund Framework and the Proposal Guidelines. Most participants in the administrative group felt that the proposal process was challenging and expectations were not always clear. Several participants commented on the process of producing multiple versions of the proposal and expressed a desire for more clarity in guidelines. One participant felt that it would have been helpful to have some technical assistance during the development of the proposal,

> The truth is that, as the time passed that they were out working and reading…some of the details…but you know very well that if one doesn't have all of the tools in your hands…you can work through it, but you lose time in looking for them. So, we needed *someone*…and to bring them to the other countries that really are going to do the proposals, or are making proposals…someone accompanying us [in the process]…

Many participants in the administrative group felt conflicted between Global Fund expectations and balancing local capacities, needs and resources. In the focus group activity, participants felt that some expectations and conditionalities, particularly regarding conflicts of interest and participation on the CCM, were not reasonable given the limited number of resources in the country. One stakeholder felt that the processes and demands of the Global Fund were unclear and changed with entry into the second phase of funding, stating:

> What happened is that for the second phase, the principal receptor and the sub-receptor solicited technical proposals from different institutions to formulate the second phase. But in this moment, they don't follow through with many things that, in actuality, they are saying about changes. For example, they have requested for the country that they approve a document that is called 'Conflict of Interest' for the CCM and another document that is called 'Regulations of the CCM' for its operational functions. And another document that is the expansion of the new sub-receptors for the HIV/AIDS funds. These things are part of the evaluation that they have done, I understand, for the first phase…up to

> this point where we are. And the country has met these requirements. I believe that they are conditionalities to guarantee funds for the second phase. Anyways, I personally feel that the rules of the game have changed in relation to the first phase. Because in the first phase, I understand that the project was adjusting, settling in…getting to know the country. But already in the second phase, I believe that it has been a little more demanding in technical, legal and formal terms…

These comments highlight some of the frustrations that people working on the GFP in Nicaragua have experienced and draw attention to the challenges countries face in maintaining ownership and leadership while providing accountability and transparency to the Global Fund. Much of the frustration stems, at least in part, from peoples' lack of familiarity or experience with conditions and 'norms', such as those related to conflicts of interest.

4.8 Summary

The entrance of the Global Fund has created new structures, policies and programming for TB in Nicaragua. The five-year program has offered significant opportunities for PATB, the NTP and health personnel in Nicaragua. These results illustrate the multiple impacts, challenges and successes the Global Fund is having at various levels. In TB control, the activities funded under the Global Fund appear to be improving key indicators, such as case detection and abandonment of treatment. Participants' attribution of this improvement to TB clubs and improved community awareness of TB and its symptoms demonstrate some level of success for the project. In health systems, the Global Fund is having an impact through creating spaces for increased collaboration between public and private health care providers and extending NTP programming to include educational activities for health personnel outside of the NTP. Participants felt that the successes in both of these key interest areas, however, were dependent upon long-term local motivation and commitment. Health rights are described as critical components for understanding TB and TB control in Nicaragua and some positive changes have been observed in relation to the TB clubs, particularly with respect to reducing stigma.

Despite the perceived successes of the Global Fund in Nicaragua, these findings also highlight the project's vulnerability to multiple contextual factors influencing the sustainability. Participant's responses describe a fragmented, politicized and polarized health system wherein the potential for collaboration within and between sectors and capacity

building among health personnel is restricted. The establishment of TB clubs is promising in a number of areas, but only prioritized SILAIS are funded by the GFP and the extent to which issues of discrimination or other health rights can be addressed is limited to those clubs that are functioning as active networks and support communities. Sustainability in several aspects of the GFP is hoped for, but questioned, by participants at local, regional and national levels. Some participants in this study also question efficiency and efficacy in the use of funds. Participants encountered numerous challenges with respect to specific policies, procedures and requirements of the Global Fund, including disbursement delays; adapting to new rules and guidelines in developing the proposal and completing evaluation requirements; and adhering to accountability and transparency policies, such as ensuring no conflicts of interest between sub-receptors and the CCM. These issues will be explored in more detail, returning to the literature and analytical framework, in Chapter 5.

Chapter 5 Discussion—Linking Global Policy with Local Experiences

This chapter examines study results as context-bound components of the analytical framework[65] to make links between the Global Fund and local experiences. The discussion that follows explores these connections by bringing together the experienced and contextual dimensions of phase one of the TB component of the Global Fund grant in Nicaragua. The use of the analytical framework in an ethnomethodological case study is revisited. The discussion draws from both the literature presented in Chapter 3 and the data presented in Chapter 4 to illustrate connections and highlight key findings from a critical perspective: first, in each of the key interest areas (TB control, health systems and health rights); and next, through an analysis of the overall experience of the Global Fund in Nicaragua. The chapter concludes with a summary of major conclusions, an overview of the strengths and limitations of the study, and finally, a brief personal reflection on the process and experience of conducting this research.

5.1 Analytical Framework

The analytical framework used in this study assisted in identifying appropriate stakeholders to elucidate experienced dimensions while guiding the exploration of contextual dimensions of the connections between global policy and local impacts. The multi-level structure assisted in identifying key sources of data, whether those sources were documents, administrative data or people. Two-dimensional consideration of data (*Contextual* and *Experienced* dimensions, as displayed in circles on the left hand side of the framework) allowed for deep and systematic consideration of multiple contextual layers influencing the experience of the Global Fund in Nicaragua. Lived experiences were woven through these layers to create a deeper, representative understanding of both how the Global Fund is having and impact in Nicaragua and why a particular impact might be happening. The

[65] Presented in Chapter 1 (p. 16) and in alternative format in Chapter 4 (p.89)

original framework for linking globalization with health outcomes (20) has been used to analyze the local level impacts of macro-economic policies on health outcomes through historical data and document analysis (201). The adaptation of this framework to include experienced dimensions allowed for a qualitative approach that incorporated new data with historical document analysis. This framework was useful, practical and offers application to any setting in which global-level policies or decisions, influences, impacts and challenges are trying to be understood from a local level.

5.2 Making connections through an ethnomethodologically informed case study

Ethnomethodology became a popular approach for exploring organizational structure in the 1980s (45, 202-205) and offers opportunities to consider both the micro and macro order created within a particular structural context (206). The presence of the Global Fund in Nicaragua introduced a new set of structural and procedural policy boundaries and, potentially, a new set of opportunities for both people connected to the NTP and the population as whole. These boundaries and opportunities are interpreted and understood by stakeholders at various levels (national, regional and local) in different ways. This study's adoption of an ethnomethodological approach validated the use of stakeholders' experiences for exploring how the Global Fund is understood as an everyday reality and allowed for the deep consideration of context demanded by the study design. Complementary to the analytical framework, this particular methodology offered a set of research tools that were helpful in elucidating how a stakeholder, whether an administrator, clinician or PATB, understood and experienced the Global Fund project. Like the analytical framework, this methodology was practical, useful and contributed to the integration of a broad range of experiences to explicate connections from the local level through to a set of global policies.

5.3 Advances and Challenges in TB Control

Study findings exploring the experienced impact of the Global Fund on TB control were organized under measurable indicators, communication, drug supply and laboratory capacity, and political commitment in Chapter 4. Other explored aspects of TB control included beneficiaries of the Global Fund and issues related to accessibility, as discussed below.

5.3.1 How is the Global Fund affecting technical components of the NTP?

Most participants either directly or indirectly identified case detection and abandonment (or default) rates as improved as a result of the Global Fund's presence in Nicaragua. Participants attributed these improvements to the introduction of TB clubs and the use of nutritional incentives for PATB, both of which are funded as part of the Global Fund project (GFP), and expressed a desire for the funding of these activities to continue as regular components of the NTP. Food packages were distributed as part of Global Fund activities in prioritized departments only. Most clinical participants felt that they had fewer food packages to distribute than were needed. No quantitative data were available to verify the purported reduction in default and improvement in case detection; however, research on the effectiveness of TB clubs and the use of incentives for completion of treatment in other countries have demonstrated improvements both indicators.

TB clubs have been shown to significantly reduce default rates, improve compliance and create supportive social networks for PATB (124, 207). In Nicaragua, as has been done in other countries, these TB clubs are being used as a forum for sharing information and improving awareness of TB, its symptoms and treatment among PATB. Providing health education combined with incentives has been associated with greater adherence to treatment and positive treatment outcomes (208). Incentives distributed to PATB at high risk of default have been used in a variety of settings. Health service support and financial incentives were explored for their potential impact on treatment compliance in Brazil, where support for food and transportation were found to be important factors for improving compliance with treatment (209). Incentives have also been shown as effective tools for improving compliance with TB treatment among vulnerable, impoverished populations in Canada and the United Sates (210-215), though no studies exploring this option in LMIC were found. Given this lack of research, the evaluation of both the TB clubs and food packages in Nicaragua will be important for learning from the experience in a setting with limited resources and justifying the continuation and expansion of financial support for TB clubs and nutritional incentives.

Participants placed a great deal of significance on these two numerical indicators. Of the two indicators, abandonment of treatment can be accurately compared to previous data to determine if changes are occurring after the introduction of the Global Fund grant and should be involved in evaluating the performance of the GFP. Though analyzing trends in

case detection is critical for evaluating the effectiveness of the NTP, it is interesting that case detection *rate* is considered a priority outcome when much of the Global Fund activities in Nicaragua focus on community education, developing human resource capacity, improving coordination with the HIV/AIDS program and the private sector, and expanding community DOTS. Though each of these activities may contribute to improving case detection in the long-term, significant changes are unlikely to appear in the first year or two of the GFP implementation; yet, these are the indicators measuring progress and establishing the foundation for performance-based continuation of funding with the Global Fund. The global emphasis placed on measurable indicators, through the MDGs[66] (11) for example, and the historical tendency for Nicaraguan health services to be dependent upon external assistance (174) create further pressure to focus on these quantifiable measures. This emphasis on two measurable indicators may distort both the successes and ongoing challenges faced by the NTP under the Global Fund.

The Global Fund's requirements for performance-based funding compound the pressure felt within the NTP to produce favourable outcomes in case detection. The emphasis on case detection placed pressure on the SILAIS for not achieving targets in case detection, despite the lack of evidence on which to base an accurate estimation of the expected incidence of TB. This pressure to focus on case detection is not isolated to Nicaragua. In a review of national TB control programs in twelve countries between 1990 and 1995, an excessive emphasis on case detection is highlighted as contributing to lessening the attention given to treatment and cure of TB (216). The authors called for the technical emphasis of TB control programs to be placed on curing cases rather than on case finding. Despite the evidence supporting this change of focus, case detection has persisted as a global target against which programs measure their success.

The repeated reference of case detection based on the calculation described in Chapter 4[67] demonstrated the acuity of this perceived pressure to perform and produce favorable numbers felt by participants across all levels of service delivery in the Nicaraguan

[66] MDG goal six, target eight explicitly identifies the detection of 70% of smear positive cases around the world, despite the impossibility of calculating an accurate denominator for this estimate.

[67] As described on p. 92: The NTP calculates case detection using the number of first contacts in individuals over 15 years of age in the public health care system, assuming that 2% of all first contacts will have respiratory symptoms and one in twenty of these symptomatic individuals will test sputum-smear positive for TB. CDR is calculated by comparing detected smear-positive cases to the number of anticipated cases, as determined through these two assumptions.

NTP; yet this calculation is neither an appropriate representation of the success of the program nor demonstrative of a significant correlation between respiratory symptomatics examined and cases of smear-positive TB detected (217). Though some participants questioned the appropriateness of the use of this indicator, others expressed discomfort with challenging the calculation. In the context of this pressure to perform, the Global Fund holds substantially more power than recipients of their grants. More efforts should be made by the Global Fund to ensure countries have the support they need to determine appropriate indicators on which to measure success and make performance-based decisions.

Participants identified other aspects of the DOTS strategy as successes and continued challenges under the GFP. Improved communication between SILAIS, for example, was felt to be an important advancement for the program, though this success is not reflected as part of the performance-based evaluation of the project. Drug supply and laboratory capacity were not identified as major concerns for most participants, though there was some acknowledgement of the expansion of NTP services to include treatment for MDRTB and purchase new microscopes. Drawing from study results, a need for continued technical support is clear. Nicaragua needed greater support during the development of the grant proposal and relied on the Damian Foundation for technical advice and assistance following this process. The Damian Foundation was sometimes providing informal support to SILAIS that were not under the foundation's umbrella[68] and often collaborating with the TB component of the Global Fund project as well as the NTP. A recently published document has acknowledged the need for greater technical assistance in recipient countries and identified the Stop TB Partnership, of which Damian Foundation is a part, as a potential collaborator in achieving this (218). Collaboration between the Damian Foundation and the GFP has already started in Nicaragua; however, formal acknowledgement of the technical assistance provided by the Damian Foundation in Nicaragua could help to clarify roles and ensure that the NTP and the TB component of the GFP are receiving, and have access to, appropriate support when it is needed.

Participants identified improvements as well as ongoing challenges in political commitment. The WHO and the IUATLD call for the expansion of DOTS to include sustained political commitment through acknowledgement of TB control as a public good

[68] 7 SILAIS are prioritized under Global Fund and 10 are provided with technical assistance and more modest financial support from the Damian Foundation

with widespread benefits to society and multi-sectoral responses addressing social and environmental factors that increase the risk of developing TB (219). Political commitment is complex and is influenced by the capacity within the public health sector to sustain programming. Nicaragua's progressive movement towards a selective primary health care strategy and reduced or restricted budgetary support of social programming under structural adjustment have led to a very low investment in health[69] (150). Despite the low prioritization of health on the national agenda and the still lower prioritization of the NTP within the health sector, the NTP has been integrated into publicly provided health programming (albeit almost entirely funded with external resources) since the Somoza period. This demonstrates some form of sustained commitment to TB control.

As discussed in Chapters 3 and 4, prioritization is an important dimension within the Nicaraguan context. Participants in this study expressed frustration over the lack of prioritization of the NTP and of TB as an endemic infectious disease affecting the population. The placement of health as a low political priority is compounded by competing priorities among a SPHC strategy that targets maternal child health above all other programs. It seems that the presence of the Global Fund money brings a certain prestige and 'weight' to programs that have historically been non-priorities. Several administrative participants felt that the project had made both the NTP and TB more prominent in the country, implying that the increased funding and high profile nature of the Global Fund had affected the status of TB as a higher priority than it had been in the past; however, concern remained that other priorities and complexities of the public health system would continue to take precedent. In this sense, the risk NTP is at risk for becoming another short-lived health campaign that is prioritized for a brief period of time and then fades into the background as a different, higher-priority campaign emerges.

These concerns perhaps best highlight the gaps between the sufficiency of Nicaragua's political commitment and extent of internal capacity. In the end, as stated by one participant, much depends on the local level commitment and motivation to continue with the community education and mobilization that are occurring around Community DOTS and TB clubs. Though clinical participants expressed a remarkable sense of fulfillment from and commitment to their patients in the NTP, the longevity of local

[69] The total per capita investment in health is estimated as ranging from 45-60 USD between 1999 and 2003 in Nicaragua (See: http://www.who.int/entity/whr/2006/whr06_en.pdf).

commitment is threatened by both the MINSA policy of rotating nursing staff through programs and the multiple roles and demands on health care providers at a local level. This threat is compounded by the lack of prioritization given to TB. If health personnel are forced to prioritize their time investment among various activities and greater pressure is felt for a high-priority program, such as that of the Rubella immunization campaign, it is highly likely that the maintenance of 'additional' activities in community education and facilitation of TB club activities will be challenging.

The CONAPAT and the CCM were identified as two structures that are sustainable changes under the Global Fund, though the former was formed independent of any Global Fund initiative. These two structures were thought of as advocates and organizational supports for seeking and securing future funding for activities related to TB, implying an internal expectation for continual need of *external* financing. The expectation of a need for either a new source of, or renewal of current, funding inherently questions the sustainability of the TB component of the Global Fund project in Nicaragua. Once Global Fund monies are no longer available, the program will be dependent upon finding equivalent new funding if activities, such as support of the TB clubs, community awareness campaigns, human resource development and distribution of nutritional incentives, are to continue.

One important challenge facing the CCM is the internal power struggle in who gets to make decisions. A few participants identified the barriers to function-ability created by internal conflicts over who participates, what participation should look like and how roles should be defined. The absorption of time and energy in determining roles and setting group norms within the CCM is perhaps a reflection of a lack of capacity and skills in process. There is little support provided by the Global Fund for countries establishing a CCM with the exception of a guideline document that can be found on the Global Fund website[70]. Other countries have encountered difficulties in achieving a functional CCM (as envisioned by the Global Fund) with clearly defined roles (18, 220). In Uganda, the lack of clarity in member roles and responsibilities as well as a lack of communication between CCM members were identified as factors contributing to the withdrawal of Global Fund support (221). Despite an obvious potential to improve collaboration between multiple policy actors, the Global Fund assumption that recipient countries will have sufficient

[70] http://www.theglobalfund.org/en/apply/mechanisms/guidelines/

capacity to establish the complex organizational structure of a CCM by following documented guidelines is perhaps over-ambitious.

Finally, participants felt that political commitment in terms of increasing the profile of TB and TB control while reducing stigma against TB in Nicaragua was influenced by a series of research projects funded (either directly or for dissemination of findings) under the GFP. The publication of research on costs associated with seeking treatment among PATB (191) and perceptions and changes in stigma associated with TB (129, 191) in peer reviewed journals bring international attention to the NTP and may contribute to increasing internal awareness of and attention given to TB in Nicaragua. There is room for ongoing research on the impact of the Global Fund, particularly with respect to the use of incentives on default and completion of treatment and the effectiveness of TB clubs.

5.3.2 Who is benefiting from the Global Fund?

The Grant Agreement identifies the general population, people living with tuberculosis, primary school children, adolescents and youth, and people living with both HIV/AIDS and TB as target groups or beneficiaries under the TB component of the GFP in Nicaragua (41). Despite the identification of children and youth as key beneficiaries, no activity could be found in the Grant Agreement that would lead to a direct benefit for these groups. Perceived beneficiaries of the Global Fund differed from those identified as target populations in that health personnel were felt to be one of groups benefiting the most from the presence of the Global Fund. This was felt to be associated with the improvement of human resource capacity through training, skill development and increased knowledge of TB control for health personnel both within and outside of the NTP. Administrative participants also felt that through these activities and the increased availability of funds under the GFP for conducting supervision, they were able to provide better supervision at a local level. Given that supervision is a key component of an effective DOTS program (219), it is clear that the general population will benefit from strengthened resources in this area. The NTP and health personnel, however, should be acknowledged in the Grant Agreement as key beneficiaries so that this progress can be recognized in performance assessments.

Participants infrequently identified direct benefits to PATB with the exception of the benefits received through nutritional incentives in prioritized SILAIS. Despite relatively

few direct benefits, PATB were identified as indirect beneficiaries in a number of ways. The creation of community support networks through the establishment of TB clubs was felt to have an impact on improving satisfaction with treatment, reducing default, improving self esteem and contributing to the reduction of stigma among family and community members. Furthermore, in some areas, these clubs became networks for bringing people with a cough to the NTP for testing. These are significant achievements, particularly given the generally poor reputation of MINSA and the tendency for people to wait until they are gravely ill before seeking testing treatment from the NTP.

Again, little space has been made in the outcome indicators to acknowledge these successes in performance appraisals. In fact, no qualitative evaluation was established to determine the quality of TB clubs established. In some areas, these clubs were observed to be high-functioning social networks whereas in other areas, participation in the club seemed rather tokenistic. These clubs could serve to be a sustainable component requiring little long-term funding and should be evaluated for quality in addition to simply reporting the number of PATB who participate in an official TB club activity. The GFP is therefore having some important impacts on groups not identified as targets while impacts on some target groups remain unclear.

5.3.3 What's happening with Accessibility?

Chapter 4 described geographical, financial and cultural aspects of accessibility to TB services in Nicaragua. Participants considered these aspects to be influenced both directly and indirectly by the Global Fund, though improvements in accessibility were limited. Nicaragua faces many challenges in achieving 100% geographic accessibility given the large proportion of the population living in rural or remote settings[71]. Though participants often acknowledged this challenge, many felt that improvements in geographic accessibility were being made with the expansion of community DOTS in selected areas. As with other initiatives, the sustainability of community DOTS as a strategy for bringing testing and supervision of treatment to populations with poor access to health centres is dependent upon the local commitment and motivation of health personnel. This is

[71] In 1995, 57% of the population lived in urban settings (an increase from 30% in 1940). (See: http://www.paho.org/english/sha/prflnic.htm)

particularly true of the volunteer health workers, or *brigadistas* (discussed in more detail below).

Financial accessibility to service on one hand was ensured through the provision of free testing and treatment for TB. On the other hand, *getting to* a clinic providing NTP services for testing and treatment was not so straightforward. The findings demonstrate complexity in the pathways to care for TB: people with symptoms of TB were spending a lot of time seeking private sector services and private sector services were keeping their patients as long as possible before referring to the NTP. This agrees with previous research in Nicaragua that demonstrated high costs incurred by TB suspects prior to referral to the NTP for sputum examination. The authors identify the poorly performing, unregulated private sector and the delayed use of front-line health workers (in public health centres) as the most important contributing factors. Recommendations from this research included the development of strategies for becoming more involved in private sector regulation and promoting the use of front-line public health services by the NTP (191). Findings from the present study provide further confirmation of the appropriateness of these recommendations by highlighting factors contributing to the delayed use of front-line public health services, namely the poor reputation of MINSA and fear of discrimination as well as those contributing to excessive time spent in the private sector (discussed below).

Another factor influencing both financial and geographic accessibility is the ability of PATB to go to the nearest clinic on a daily basis. As experienced in other settings (222), participants in this study felt that finding financial resources to pay for the cost of transportation and absorb the potential loss of work resulting from their illness (either because of their physical inability to work while sick, result of discrimination, or lack of employer support for the time needed to visit the health centre during the hours services are offered) was difficult. All participants in this study acknowledged that the majority of PATB in Nicaragua are facing extreme poverty. Several participants shared stories of PATB who lost their job as a result of their diagnosis with TB. No participant shared an experience where they felt supported by their employer through their treatment. Financial accessibility was therefore compromised by contextual factors related to poverty, high rates of under- and un-employment and widespread discrimination with violations of PATB rights. The identification of these barriers to financial accessibility validates the emphasis placed by the GFP on improving community awareness of TB, enhancing collaboration

with the private sector, and expanding community DOTS; but also highlights opportunities for greater involvement in improving the reputation of public health services, investing in TB clubs as potential agents of change and advocacy and creating flexibility in services to adapt to the needs of PATB.

Cultural accessibility was influenced by a number of different activities supported under the GFP. One potentially sustainable development and improvement to cultural accessibility was the establishment of TB clubs. Both local health care personnel and PATB expressed positive feelings related to participation in a TB club. Several participants felt that the TB clubs were helping to reduce stigma, improve case detection and reduce abandonment by establishing supportive communities and networks for providing education about TB and its symptoms. In one region, the TB club functioned with minimal funding despite facing substantial barriers created by the five-month medical strike that kept their health centre's doors closed. This example was a demonstration of strong local commitment, dedication and motivation. TB clubs functioning in such a way were a clear strength for the program and, as recommended by one participant, could serve as a forum for strengthening community capacity and advocating for the rights of PATB. These clubs were also contributing to reducing stigma, discrimination and isolation felt by PATB through the involvement of family and community members in club activities. Unfortunately, there was little room to acknowledge the strength and success (nor the limitations of clubs functioning under a paternalistic rather than participatory model, as was observed in one setting) of these clubs as achievements within the GFP outcome indicators (41).

The education campaigns were having some positive impact on improving cultural accessibility by improving community awareness of TB; however, the sustainability of this change in awareness is uncertain when taken in context with experiences shared by participants. One participant's comments on the rapid rise and fall of people seeking testing from the NTP following a radio and television campaign exemplified the culture of campaigning and its influence on health care seeking behaviours in Nicaragua. When the campaign was active, people with cough were actively seeking testing for TB; but when the ads were no longer running, people stopped seeking testing. Nicaragua's history of popular health days and targeted campaigning, for example with malaria or specific vaccinations (90, 150, 165, 169), was discussed in Chapter 3 as contributing to a 'campaign culture'. The

experience with the radio and television campaign supports this idea: populations are accustomed to being informed by the government about what their health concerns *should* be under a particular campaign.

This campaigning for specific vaccinations or programs was felt to align with external priorities. One participant, for example, spoke of the exhaustive attention placed on the externally funded rubella vaccination campaign in late 2005 and felt that other programs, including the NTP, suffered as a result. Another example was the ongoing maternal-child health campaign (also heavily funded by external donors) that was identified as a program receiving more attention and priority than others. Further contributing to the entrenchment of a campaign culture is the constant state of extreme need in which the public health sector is placed. When resources are stretched and restrained, it is understandable that if a specific program has more resources at one particular time then greater attention is given to that program over others. Health campaigns are not always effective at increasing knowledge of, or testing for, various diseases (223-225). Furthermore, within this culture of responding to current health campaigns, populations may risk losing a sense of ownership over their health and, rather than actively seeking services when ill, may tend toward seeking whatever services are currently advertised regardless of being ill or well.

Given the nature of the NTP, and its reliance on passive case detection, community awareness of TB and its symptoms is critical to program performance. The lack of community awareness combined with low prioritization of TB at a national level place the program in a vulnerable position. In a population with endemic TB, this is particularly problematic given the culture of health campaigns and the tendency for populations to respond to targeted illnesses rather than being alert to the signs and symptoms of infectious pulmonary TB. The sustainability of educational campaigns as a strategy for increasing case detection and/or testing of people with suspected symptoms of TB is therefore quite uncertain. Research exploring Nicaragua's campaign culture would provide valuable insight into this phenomena and its influence on health care seeking behaviours, health and disease knowledge and perceived ownership of health.

In summary, the Global Fund is influencing geographic, financial and cultural aspects of accessibility in positive ways. The sustainability of the strategies supported with Global Fund monies is, however, contextually bound. Many opportunities exist with the expansion of a community DOTS strategy and the establishment of participative, social

support networks through TB clubs, though the lack of an evaluation structure that acknowledges these successes of the GFP may threaten their long-term sustainability by not documenting their value. Local commitment, dedication and motivation also play an important role in maintaining achievements in improved accessibility, particularly if the continuation of these activities is to be based on volunteerism. Addressing issues of cultural accessibility are perhaps the most challenging in Nicaragua. Despite this obstacle, some success can be seen in the reduction of stigma against TB in local communities and within families participating in the TB clubs. Widespread stigma, discrimination and lack of awareness of TB, its symptoms and the fact that it is curable persist. Targeted campaigns may not be the most effective or sustainable strategy to overcome these obstacles given the history and culture of health campaigns in Nicaragua.

5.4 Advances and Challenges within Health Systems

Study findings exploring the experienced impact of the Global Fund on health systems were organized in Chapter 4 as they related to coordination and collaboration with the private sector, movement of health personnel and impacts on other programs.

5.4.1 The Private Sector and the NTP: Collaboration or conflict?

Private health sector services around the world have come to play an important role in TB care (226). Despite the role of private services in health, many NTPs face substantial challenges and structural barriers to collaboration (85, 119-122), such as the lack of organization within the private sector and the "ideological opposition to leaving TB care to market forces" (p. 18) (227). Not engaging the private sector, however, could contribute to hindered case detection and diluted epidemiological impact of DOTS (122, 227). The rapidly growing, unregulated private sector plays an increasingly important role for health services in Nicaragua. The poor reputation of public health services, the wide range of private profit and not-for-profit options and the continued use of *curanderos*[72], particularly for rural and remote populations, all contribute to the importance of the private sector. Study findings showed that private sector services were commonly the first point of contact. Each of the five participants in the PATB group sought care outside of the public sector before diagnosis with TB, despite relatively limited financial capacity to absorb costs related to

[72] Traditional healers or shaman

private services. This preference for seeking private sector services before 'resorting' to the public sector was confirmed by previous research (191). The nature of the mixed public-private model of health care services in Nicaragua, the tendency for individuals to seek care outside of the public sector as a first choice and the use of passive case detection imply a need for strong collaboration between the NTP and private practitioners. If suspected cases of TB are to be detected and placed on treatment early, practitioners outside of the public health system need awareness of the NTP, capacity to consistently identify signs and symptoms of TB, and willingness to rapidly refer patients to the NTP.

There was a notable range in perceptions of the awareness of TB within the private sector as well as the extent of private sector engagement. The provision of education about TB and the NTP in medical education means that all graduating physicians in Nicaragua should have had at least some opportunity to develop an understanding about TB. No formal educational institutions are involved in the training of *curanderos*, thus these practitioners cannot be expected to have some understanding of the importance of referring suspected cases to the NTP unless they have been actively sought out and provided information by the program. This was not the case, however: *curanderos* were not part of the strategic education provided by the NTP in some regions. Engagement of formal care providers outside of the public sector varied substantially in the three departments involved in this study. Some participants felt that the general increase in awareness of TB was resulting in improved collaboration with private sector service providers. Some departments were providing education specifically targeting private practitioners. It would be interesting to compare pre- and post-levels of knowledge about TB as well as willingness to refer suspected cases to the NTP with private practitioners participating in these educational events.

A systematic examination of the Nicaraguan health sector identified the lack of regulation of clinics, integration of with public services, and standardized user fees as well as weak supervision and monitoring of the private sector as major problems within the private sector (178). Most participants expressed concern over the tendency for private practitioners to keep patients under their service, charging fees for service or diagnostic tests even once TB is suspected. Participants' examples of private practitioners ordering unnecessary tests and prescribing inappropriate medications (sometimes even when a diagnosis of TB has been documented) demonstrate a lack of private sector willingness to

refer patients to the NTP. The NTP faces further challenges resulting from the lack of regulation within the private sector that creates an environment in which the protection of public interests can neither be guaranteed nor enforced. Given that these challenges are contextual and likely not isolated to TB and the NTP, there may be an important opportunity for the GFP to influence policy on private sector regulation through structures such as the CCM or the CONAPAT.

5.4.2 Investing in Human Resources

The DOTS strategy can be an opportunity for strengthening health systems because of the shared goals of technical efficiency, equity and quality, particularly if capacity building is emphasized (123). Capacity building can take the form of enhancing dialogue and collaboration between multiple policy actors or through investing in human resources. The investment in human resource development was felt to be an important achievement of the GFP. Human resource development was occurring at multiple levels as a result of the GFP, from national administration to local clinics, laboratory workers and networks of voluntary health workers. No activities extending educational sessions to *curanderos* were found under the GFP and training of private practitioners was variable between departments. Capacity for those receiving either formal or informal training under the GFP was built in technology, contributing to improved communication within the NTP and between departments; in refresher courses for nurses working in local health centres; and for the rolling out of community DOTS through training *brigadistas* about TB, sputum specimen collection and supervising treatment. These advancements in human resource skills and capacities were felt to contribute to maintaining quality of care, increasing job satisfaction and improving accessibility to the NTP. This investment in human resource development could also contribute to a ripple effect within the public sector, leading to a general strengthening of health systems as suggested by some commentaries on the Global Fund (138). Much of the opportunity for strengthened health systems and human resources depends, however, on local commitment and motivation.

Local commitment and motivation is particularly important for the critical link between communities and the NTP: voluntary health workers, or *brigadistas*. One training session intended to facilitate the 'rolling-out' of community DOTS through *brigadistas* was attended during fieldwork. It was a half-day session that was facilitated well and included participant

evaluation. This activity was considered sufficient training to classify the *brigadistas* as prepared to deliver community DOTS. The comments of the *brigadistas* during this activity, however, raised concern over the plausibility of their active participation in community DOTS. They felt under-recognized for their work. Some *brigadistas* didn't have an identification badge certified by the Ministry of Health, which was perceived to be validating and important to those who had received one.

The program's dependency on volunteerism in the context of little gratitude or acknowledgement from MINSA or the NTP is problematic. *Brigadistas* provide multiple services to their communities and participate in the same culture of prioritization that occurs in health centres. Additionally, *brigadistas* emerged from a context of community organization and mobilization that was dramatically different from the current political environment in Nicaragua. The sense of a shared 'cause' in fighting to overthrow a dictator and fighting for social justice that spurred the network of *brigadistas* as community health workers in the late 1970s and throughout the 1980s has been replaced. It is ironic that MINSA continues to depend upon volunteerism under a neoliberal economic model and in the context of blatant corruption among political leaders. With little recognition, competing interests, political disillusionment and no unifying or common cause under which support for community health workers can be rallied, it is unlikely that a half-day training session will lead to sustained community commitment to DOTS.

5.4.3 Migration, Brain Drain and Human Resources in Health

The migration of health workers has received growing international attention, particularly given the dramatic shortages of health personnel in Africa (228) and the so-called 'brain drain' of health professionals from low to high-income countries (20). Little research is available on the migration of health workers in Latin America, however high rates of migration out of Nicaragua have been well documented (229, 230). During the revolution and *Contra* war, many trained health professionals migrated out from Nicaragua to the United States and Canada (150), a phenomena that participants in this study felt continued. Most participants in this study felt that factors such as low salaries and limited opportunity for career development contributed to the outward migration of health workers and that the Global Fund *per se* was having little to no influence on these trends. The hiring of three experienced physicians to head each of the three components of Nicaragua's overall GFP

does represent a brain drain of sorts, in that experienced health personnel were pulled from public services to work in a private, not-for-profit coalition (*NicaSalud*, primary recipient of the Global Fund grant); however, this represents a minimal contribution to the loss of health personnel experienced by the public health sector as a whole. Based on the results of this study, the general migration of health personnel in Nicaragua cannot be directly, or even indirectly, linked to the presence of the Global Fund.

5.4.4 Collaboration & Impacts on other Health Programs

The growing relationship between HIV/AIDS and TB, particularly in African countries, has brought attention to the need for greater collaboration between programming for these infectious diseases (231). Intersectoral collaboration is not a direct goal of the GFP. It is, however, implicit in the representational requirements for CCMs and the promotion of collaboration through the Framework Document and the Proposal Guidelines. The study findings reveal that collaboration with other programs remains a challenge across all levels of the NTP. There was agreement among both national and regional administrators as well as clinical participants that little collaboration occurred with other public programs. Collaboration with other institutional actors was felt to have improved substantially since the establishment of the Committee for the Support of Persons Affected by TB (CONAPAT). Some members of the CONAPAT have been approved as sub-recipients under the TB component of the Global Fund grant, namely CIES and the Damian Foundation[73]. The CONAPAT offers opportunities for collaboration at a national level by creating dialogue space between different actors, including the private sector and military service[74]. This committee could serve an important advocacy role for PATB and is having an impact on reducing the isolation of the NTP.

It is possible that potential for collaboration is limited by stigma associated with TB and other culturally misrepresented infectious diseases. The NTP has a historical tendency to function in isolation. Two possible contextual dimensions may be contributing to this tendency: stigma and discrimination against TB and historical development of the NTP under the highly specific DOTS strategy. Both the research by Macq *et al.* (129) and this

[73] The Global Fund funded the finalization activity for the stigma study conducted by CIES and the Damian Foundation.
[74] Military service has a separate, semi-private health care system.

study demonstrate stigma and discrimination against PATB, as well as HIV/AIDS, among health care professionals. Macq *et al.*'s research around stigma against TB in Nicaragua illuminates widespread discrimination against TB that extends to the health sector as a whole. Two clinicians in this study discussed initial reactions to their assignments with the NTP as fearful, angry and resistant. These underlying stigma and misconceptions about TB may entrench the isolation of the NTP, particularly given the context of its low rank among national health priorities.

Most regional administrators in charge of the NTP in Nicaragua carry the additional responsibility of administering the HIV/AIDS program. In regions where this is not the case, the two programs often share office space, but do not collaborate frequently. The structural placement of these two programs as complementary is advantageous in some ways; however, the programs continue to function as separate entities and may serve to entrench isolation of vertically oriented programs rather than create opportunities for collaboration among, or between, other public health programs. Despite the placement of the NTP as an integrated component of Nicaragua's public SPHC strategy, communication between programs seems minimal even when one person at the regional level is responsible for two programs. There is potential for health system strengthening to develop through investments from institutions like the GF, but sustainability will always be in question if there is no capacity to support change.

5.5 Is there Room in the Global Fund for Addressing Health Rights?

The obligation to progressive realization of the right to health requires nation-states and the international community to do *something* towards the realization of universal human rights is recognized in a number of international documents (232). In this study, the definition of the right to health was taken from the International Covenant on Economic, Social and Cultural Rights (ICESCR), which recognized obligation to take steps towards reducing infant mortality rates; promoting healthy childhood development; improving environmental and industrial hygiene; preventing, treating and controlling epidemic, endemic, occupational and other diseases; and creating conditions that assure access to medical treatment (233). Rights associated with underlying population determinants of health, such as the right to education, to water, freedom from hunger, adequate housing, and the right non-discrimination are outlined in these documents (199). These rights mirror

factors outlined in the model for population health promotion presented in Chapter 1 (Figure 1.2, p. 9) and have been identified through research as challenges faced by PATB (117, 118, 125-129). Exploring experiences related to the health rights is therefore one way of examining the Global Fund from a population health perspective.

This study demonstrated resounding consensus in an acute awareness of Nicaragua's state of extreme need. Participants described statistics and stories illustrating grossly inadequate housing, access to water and sanitation, nutrition and working conditions. Though most participants felt that many components of the right to health[75] were contributing to population vulnerability to TB, few felt that much could be done to address the multiple social, environmental, economic and structural challenges facing PATB. These population health determinants, however, were not considered to be challenges isolated to PATB, but rather part of the complexity of the Nicaraguan context. Some participants felt that the lack of law and policy enforcement was a contextual barrier to addressing these issues, while others felt there was no room to address health rights because neither the Global Fund nor the NTP were intended to do so. One of the few health rights identified by participants as being affected or influenced positively by the Global Fund was the provision of nutritional incentives (food packages) to some PATB during treatment. The other opportunity for addressing health rights, though indirectly, through the Global Fund was using TB clubs as foundational structures for rights advocacy, particularly with respect to reducing stigma and discrimination. In this study, then, health rights were considered to be important issues needing improvement, but the Global Fund was not thought of as a direct or potential agent of change in Nicaragua.

The conditions of poverty and stigma experienced in Nicaragua are not unique. By definition, most LMIC share characteristics of low gross national income and high debt burdens[76]. Not considering the Global Fund as a potential agent of change or advocate for improving health rights is concerning for two reasons: first, there is a large body of literature demonstrating the cyclical relationship between poverty and TB (95-101); and second, the purpose of the Global Fund explicitly states that its purpose is to contribute to poverty reduction as part of the MDGs (13). *How* the Global Fund will contribute to poverty

[75] Shared with participants through the use of a cue card (See Appendix C).
[76] World Bank classifications of low, middle and upper income countries can be found at: http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20420458~menuPK:64133156~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html

reduction is not explicitly described; though the purpose statement implies an impact on poverty reduction through the reduced morbidity and mortality from AIDS, TB and malaria, making the Global Fund's support of infectious disease control a global public good.

The fundamental economic argument for investing in this public good was described by Price-Smith as two fold: first, infectious disease is a threat to global security and needs to be controlled; and second, the negative effects of infectious disease on populations, including increased inequalities between rich and poor and significant aggregate micro- and macro-economic constraints, are related to the diminished capacity of individuals to contribute productively to society (136). This economic argument creates a particular lens through which poverty is considered: as an outcome of illness, rather than a complex structural issue affected by macro-economic policies and super-ordinate aspects of a globalized world. Investing in infectious disease control is instead justified not because it is right to do or because a responsibility exists, but because economies in both rich and poor countries are threatened. As a funding body supported primarily by the wealthy and powerful G8 countries, however, the Global Fund is in a position of political leverage. This is especially true given the acknowledgement of the intended Global Fund contribution and the growing international pressure to meet the MDGs. Poverty reduction as a goal with the Global Fund will not be addressed if it is considered the outcome of a lack of productivity alone.

On a global level, the potential for the Global Fund to be a source of influence exists in issues that *could* be addressed by leveraging power and influence within donor countries to promote investment in health system strengthening and to lobby on behalf of recipient countries to lessen conditionalities restricting capacity to invest in health and education. Global policies in health and economics are heavily influenced by these donor countries: the Global Fund's position as a large financial instrument with a growing body of research supporting investments in capacity could contribute to effective advocacy in other global policy arenas. At national levels, the Global Fund also offers opportunities in advocating for positive changes in support of health rights. Participants in this study felt that the Global Fund could provide greater support for health system development and contribute to national capacity building through the CCM. Because much of the prioritization of health programs is influenced by the 'weight' of external donors, the Global Fund could be influential in raising the profile of population health determinants contributing to the

population's vulnerability to infectious diseases. Such an influence would have positive impacts for the population as a whole. Though neither the Global Fund nor the NTP can be expected to tackle structural inequities and disparities on their own, there may be room for national and global leadership in advocating for change.

5.6 The Global Fund: Balancing bureaucracy with sustainability

The impacts of the Global Fund have been explored by a number of different large-scale investigations (16, 18, 147, 200, 234). As demonstrated in other settings (14), the increased profile and attention given to neglected diseases and the potential progress towards MDGs were considered a strength of the Global Fund in Nicaragua. Not unlike other countries, Nicaragua experienced difficulties in adjusting to the policies and procedures outlined in the Global Fund Framework and the Proposal Guidelines (17, 18). Participants in this study expressed frustration over the process of understanding and interpreting the Proposal Guidelines, highlighting perceptions of an intense investment in developing a proposal. Interestingly, this study aligns with research in African countries (15) by demonstrating an exacerbation, or at least a surfacing, of long-standing contextual challenges and barriers within health systems. In Nicaragua, these challenges and barriers have surfaced through the CCM, its bulk and the internal struggle for decision-making power.

The Global Fund offers more potential for program ownership than other approaches to aid for health because of its principles of country-driven proposals and additionality. Despite these differences, perceived ownership over programming has not been demonstrated in other settings (15, 18) nor in this study setting. Participants' focus on disbursement delays and the resultant pressure to perform drew attention to a shared preoccupation, or perhaps a constant consciousness, of the need to produce favourable results for the donor. The pressure is created at multiple levels, placing greater emphasis on completing scheduled forms and meeting targets than on carrying out high-quality activities to meet local needs. Because continuation of funding is based on performance, control is in the hands of the Global Fund. The project is country-driven, but the balance of power remains in favour of the Global Fund.

Participants considered sustainability to be threatened by a number of contextual and logistical aspects of the Global Fund in Nicaragua. The language used to describe the Global Fund "project" itself raises concerns over the country's ability to absorb program costs

independently after the grant term ends. The program's precedent dependence on external funds to maintain basic program functions means that after five years, the program may be left with a potentially unsustainable momentum. As pointed out by a few participants, much of the GFP's long-term sustainability is dependant upon local commitment, motivation and willingness to continue activities with fewer resources than currently available under the Global Fund. Community education and awareness is particularly vulnerable to unsustainable momentum in the context of Nicaragua's history of health campaigns and the tendency of the population to respond to current health-related propaganda. Further compromising the sustainability of activities and capacities developed with Global Fund support is that Nicaragua is a country facing more needs than resources. The culture of prioritization (as discussed in Chapter 3) and the generally low-ranking position of the NTP means that, once the Global Fund leaves, the progress in raising the profile of the program could revert to pre-Global Fund levels. Such a regression could result in an even lower likelihood for the Ministry of Health to sustain successful activities of the GFP.

5.7 Performance-based Evaluation: Measuring progress or meeting targets?

One of the most recurring issues emerging from this research is that of performance-based evaluation. The evaluation procedures of the Global Fund reflect commonly used strategies for program evaluation in high-income countries such as Canada. Such evaluation strategies must, however, be considered within the context a very unequal balance of power between donor and recipient. The Global Fund Guidelines for Performance-based Funding describe the strategy as intended to: provide incentives to recipients to focus on results rather than inputs; serve as a management tool; provide necessary performance information; and communicate periodic progress updates (235). Though this format for evaluation may be intended to ensure transparency and keep funded programs 'on track' and producing results, they have resulted in a focus on meeting numerical targets that do not necessarily reflect the achievement of 'results'.

The Grant Agreement highlights three major objectives: improved case detection of smear-positive cases, improved cure rate and reduced abandonment of treatment under DOTS. Maintaining the Global Fund requirement of building-upon or expanding existing programming, the project targets seven regions with higher TB incidence through strategies that include greater community participation and identification of TB symptoms,

implementation of local prevention activities and improved quality of care within the NTP (41). In alignment with the MDGs and the Global Fund's support of DOTS-based programs, the objectives of the program placed a major focus of the grant on measurable aspects of TB control.

Despite the emphasis on DOTS-based indicators, the Grant Agreement highlights activities encompassing improved collaboration with the HIV/AIDS program; enhanced human resource capacity through training; increased community awareness of TB symptoms and treatment through education; and the development of support networks through community DOTS and the establishment of TB clubs. The measurement of progress for these activities is based on counts: the number of health personnel who attended training sessions, the number of PATB tested for HIV, or the number of participants at a TB club activity, for example. The structure of program evaluation around quantifiable targets, specifically on counts, places a great deal of pressure on producing favourable numbers that do not represent successes that are difficult to measure in counts or percentages.

The shared sense of pressure among participants to meet targets offers insight into how the Global Fund's policy of performance-based funding is experienced and interpreted. The emphasis on quantitative means of evaluation provides concrete deliverables intended to provide a framework for regular evaluation of progress and accountability; however, provides little opportunity for program successes or challenges to be evaluated for quality or potential sustainability. Achieving count-based targets creates an opportunity for specious validation of 'success' while the space for acknowledging other significant gains and progress is diminished. The pressure to perform and produce numbers disallows the acknowledgement of qualitative successes. This type of evaluation risks validating indicators that may be quantitatively met, but might not lead to quality education and training, for example, to facilitate the local commitment and motivation necessary for long-term sustainability.

5.8 Conclusion

This study shares several similarities with previous research and provides insight into additional challenges and successes of the Global Fund in Nicaragua. Sustainability is threatened at multiple levels, from local to national, with contextual issues outweighing potential for benefit and overriding sustainability in some cases. Threats to sustainability

exist through a lack of capacity within the CCM, the dependency on local commitment and volunteerism for continuation of currently funded activities, and the fragmentation and disorganization of the health sector. Potential exists for these threats to be addressed, however the pressure to produce and perform may be a barrier to doing so as attention and energy is absorbed in meeting targets that are based on counts rather than on measuring some form of quality.

The later threat to sustainability raises questions about the efficiency and efficacy in use of funds. The TB component of the Global Fund in Nicaragua represents a large investment, with annual disbursements representing amounts similar to (or greater than) NTP budgets prior to the introduction of the Global Fund. With such a great investment, the profile of the NTP has received some much-needed attention and gained status among national priorities in health. The dependency on external funding and its relationship to setting national priorities in health, however, means that the NTP may return to its previous low-ranking position among Nicaragua's selective primary health care strategy when the Global Fund project comes to an end.

Performance-based evaluation, though intended to provide incentive for achieving results, may in actuality be threatening sustainability by shifting attention from measuring quality and acknowledging successes not included in the original outcome indicators towards recording and producing favourable counts. The Global Fund policies on performance-based funding should therefore be reviewed and adapted to reflect a more balanced approach to evaluation. Evaluation measures could, for example, include pre- and post-testing when training health personnel or some qualitative component so that major successes are recognized. Furthermore, the ongoing emphasis on CDR is not supported by international institutions, including the IUATLD, but continues to be included as a key outcome indicator for reporting to the Global Fund. Focusing on CDR has created internal pressure to find more cases, despite a rather presumptuous calculation that may be grossly inaccurate in estimating expected cases. Basing continuation of funding on this indicator is inappropriate.

Despite efforts to ensure country-driven projects and ownership, power remains in the hands of Global Fund. This is tied to both the pressure to perform (and secure continued funding) as well as the historical hegemonic relationship between donors and recipients. External priorities continue to drive and shape Nicaragua's national priorities.

Nicaragua is a country facing extreme need, has a long history of external domination, massive debt and strict conditionalities resulting from SAPs and PRSPs. As a result, the government has little capacity or flexibility to base budget decisions on purely internal interests or priorities. As one participant described, power is in the hands of the 'big guys'. In the face of such an unequal, inequitable balance of power, the potential for genuine country ownership in priorities, programming and results is limited.

The Global Fund has introduced a number of so-called norms and standards that are common organizational rules and structures in 'western' countries. These norms do not always translate and are sometimes impossible to fulfill when countries are limited in capacity and resources. Conflicts of interest, for example, are difficult to protect when there is only one school of public health with the capacity to do evaluation research. The Global Fund offers little flexibility in these regulatory dimensions of its policies. This further contributed to the lack of power or control felt by participants in this study. Further research exploring the role of power and ownership in sustainability of programs receiving grants from the Global Fund could prove to be useful for informing policies that can promote *true* rather than token ownership.

Finally, the Global Fund developed in response and seeks to contribute to the achievement of the MDGs. These are broad, overarching goals that have garnered international support. The MDGs, however, are based on a neoliberal framework that justifies global public good approaches to health and infectious disease in economic terms. Though these terms may serve as an incentive for international financial institutions to support efforts directed at poverty reduction and health improvements, they may counter-productively limit the potential to invest in structural capacity building and other 'upstream' strategies. There is political support, which is critical and important and creating positive results, but does this model actually lead to change? The energy and pressure surrounding the MDGs and the Global Fund create an environment of political leverage that *could* be used to influence macro-economic policies as well as super-ordinate policies and processes influencing health. The experiences of people working to implement or receiving TB services and GF activities in Nicaragua offer valuable insight into the strengths and challenges of this country-driven approach to aid for health. GF needs to give more attention to such experiences a resource for improving flexibility and assuring sustainability in program strengthening and human resource development.

Table 5.1: Summary of Major Study Conclusions

- Nicaragua's experiences with food incentives and TB clubs in prioritized SILAIS provide an opportunity to learn about the potential impact of community participation on sustainability. Research exploring these two aspects of the Global Fund project in Nicaragua is needed.
- Although performance-based evaluation intends to provide an incentive to produce results, the way such evaluation is structured threatens sustainability by measuring success quantitatively rather than balancing measured targets with qualitative assessment.
- The balance of power between donor and recipient remains in the hands of the Global Fund, as reflected by the pressure felt to complete activities and produce results. The is a historical role of hegemonic relationship between rich and poor countries influences this balance of power and should be considered as a key factor in developing true ownership in country-led programs.
- Research exploring the role of power and perceptions of ownership for country-led programs in achieving sustainability could be useful for informing policies that could serve to provide opportunities for true ownership rather than token ownership.
- The Global Fund introduces norms and standards that are common organizational rules in so-called 'Western' countries. These norms don't always translate well into other country contexts, and sometimes are not even possible, particularly when countries face limitations in resources and capacity. Flexibility to meet country needs should be considered in the Global Fund regulatory policies.
- The Global Fund is in a position of influence in global health policy. The pressure and energy around both the MDGs and the Global Fund create a unique environment in which the Global Fund has political leverage that could be used to influence and advocate for positive changes in macroeconomic policies and processes associated with globalization that are known to influence health (positively or negatively).
- The analytical framework used in this study is a valuable tool for guiding the examination of connections between policies made at a global level and the experiences of such policies from local perspectives. The framework allows for deep exploration of contextual factors at every level (global, national, local). This framework could be used in a variety of settings.

5.9 Study Strengths & Limitations

A number of strengths, limitations and challenges are offered in both methodological and logistical aspects of this study. This study demonstrated a number of consistencies with other studies exploring impacts of the Global Fund, contributing to potential for greater transferability of the results. Perhaps the greatest strength of the study design is the incorporation of experiences from multiple stakeholders across all levels of care, coordination and treatment associated with the NTP. This methodology allowed for in-depth contextual analysis and comprehensive collection of data using a variety of tools. Being a research who was an 'outsider' created both strengths and challenges for this study.

Because I have nothing to lose by criticizing the Global Fund and nothing to gain by having information about peoples' experiences with the Global Fund, it was perhaps easier for participants to provide critical feedback through me as a third party. While being an 'outsider' allowed me to ask questions that otherwise would be difficult to ask, my status as a white Canadian created an unequal balance of power. It was important for me to be cognizant of this power differential so that active measures to create balance in interactions could be taken.

The fieldwork for this study took place over six months, with an additional three months in Nicaragua for language training and study preparation meant that an unusually intense immersion in the study context was possible compared to many master's theses. This immersion allowed for the collection of thick, rich data and a deeper understanding of subtleties in culture, politics and contextual nuance than would have been possible with a shorter period of fieldwork. Despite this strength, it is impossible to capture every aspect and subtlety of the complex context of Nicaragua. The study is therefore limited to the contextual dimensions identified in the analytical framework that were accessible through observation, documentation or other form of data collection.

This study was conducted in a second language and as such, language is a limitation. Despite my comfort and fluency in Spanish, the thesis is not written in the same language that it was primarily conducted in. I transcribed twenty-five per cent of interviews and three native speakers transcribed the remaining interviews and focus group. Despite reviewing transcriptions in comparison to recordings, there is potential for human error in this process. Given these two factors, language can be considered a limitation of this study. Another limitation was the lack of available data and existence of inconsistencies in published data from the NTP. These prevented quantitative validation of qualitative claims made with respect to case detection and treatment default. Finally, the fact that the NTP does not receive funding from the Global Fund alone could be considered a limitation; however, the study focused on Global Fund activities and most participants were able to provide responses demonstrating a clear understanding of both the role and list of funded activities of the Global Fund.

Conducting research in a global health setting poses a number of challenges. The most significant challenges I encountered in the process of this thesis were in establishing and maintaining collaborative dialogue with Nicaraguan supporters. This was perhaps due to the

multiple demands on the time of my supporters, but also because they were voluntarily offering me support and guidance without honorariums. Reciprocation and closure are other ongoing challenges of which I am cognizant. I hope to acknowledge their support and participation in this study by offering co-authorship on specific publications resulting from the study. Their support will also be acknowledged in final follow-up and feedback activities that I will undertake in Nicaragua, and that are scheduled for November 2006.

Communication was another challenge, not only because I was working in a second language, but also because access to Internet and email was inconsistent. The greatest logistical challenge was the six-month long medical strike that happened to coincide almost exactly with my fieldwork. The strike resulted in repeated cancellation of interviews, scheduled activities and key appointments, such as with the librarian at the Ministry of Health. In part due to the strike, no laboratory personnel were included in the study sample. Additionally, no exclusively private for-profit practitioners were interviewed (though two practitioners with private sector ties were included). Future studies adopting this framework should consider including both.

Despite these limitations and challenges, I was at times surprised at the amount of data I was able to collect. Overall, the research process was a wonderful learning experience. I found fieldwork to be fulfilling and fascinating and hope that the results of this study are useful for Nicaragua, other recipient countries, the Global Fund and policy makers active in decision making in global policy generally.

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Appendix A

Ethics Certificates

University of Saskatchewan
Behavioural Research Ethics Board (Beh-REB)

25-Oct-2005

Certificate of Approval with Minor Modifications

PRINCIPAL INVESTIGATOR
Sylvia Abonyi

DEPARTMENT
Community Health and Epidemiology

BEH#
05-258

STUDENT RESEARCHER(S)
Katrina Plamondon

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED (STUDY SITE)
University of Saskatchewan

SPONSOR
CPHR

TITLE
The Global Fund and Tuberculosis in Nicaragua: Making links between global policy and local experiences

ORIGINAL APPROVAL DATE
25-Oct-2005

CURRENT RENEWAL DATE
01-Oct-2006

CERTIFICATION

Thank you for submitting the above application to the Behavioural Research Ethics Board for review. The Beh-REB has **approved** your research proposal on ethical grounds, **subject to the following minor modifications:**

- Please revise the consent form such that the contact information for you the researcher as well as the ethics office includes both, the email addresses, and the full phone number including the country code, area code, and phone number (e.g. 00.1.306.966.2084).

Please send one copy of your revisions to the Ethics Office for our records. Please highlight or underline any changes made when resubmitting.

The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

This letter serves as your Certificate of Approval, **effective as of the time that the requested modifications are received by the Ethics Office**. If you require a letter of unconditional approval, please so indicate on your reply, and one will be issued to you.

ONGOING REVIEW REQUIREMENTS

The term of this approval is five years. However, the approval must be renewed on an annual basis. In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: *http://www.usask.ca/research/ethical.shtml* .

Dr. Valerie Thompson, Chair
Behavioural Research Ethics Board
University of Saskatchewan

Please send all correspondence to:

Ethics Office
University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
Telephone: (306) 966-2084 Fax: (306) 966-2069

Gobierno Bolaños
¡Nueva Era!

REPUBLICA DE NICARAGUA
MINISTERIO DE SALUD
División General de Recursos Humanos
División de Educación en Salud

Managua, Febrero 09 del 2006

Licenciada
Katrina Plamondon
Departamento
Salud Comunitaria y Epidemiología
Universidad de Saskatchewan
Saskatoon, Saskatchewan Canadá
Su Despacho

Estimada Licenciada Plamondon:

Reciba saludos afectuosos de mi parte.

Tengo a bien comunicarle que la Comisión Nacional de Investigación en Salud (CONIS), ha revisado el Protocolo de Investigación titulado: ***"El fondo Mundial y la Tuberculosis en Nicaragua: Vinculando Políticas Globales con Experiencias Locales".***

Consideramos que esta investigación cumple con los requisitos y las consideraciones Bioéticas Internacionales y Reglamento Nacional de Investigación.

Por tanto, ***esta Comisión autoriza la ejecución de dicha investigación.***

Sin más al respecto, me suscribo.

Atentamente,

Dr. Ramiro López Rivas
Coordinador Nacional
Investigación en Salud

DIVISION DOCENCIA E INVESTIGACION MINISTERIO DE SALUD

Cc: Archivo

Gobierno de Nicaragua
Ministerio de Salud

NICARAGUA AVANZA
PND

Complejo Nacional de Salud, "Dra. Concepción Palacios"
Teléfono 289-4502 – Ext. 231 – Email: docencia@minsa.gob.ni

Appendix B

Interview Schedules

Guía para las/los Personas Afectadas por TB

Información General

- Descríbame un poco de sus experiencias en su educación y trabajo.
- Ha escuchado algo del Fondo Mundial o Fondo Global? Podría decirme, para usted, que lo es y que ha escuchado?
- Como describiría el papel del FM en Nicaragua?

Tema I: Programa del Control de la Tuberculosis

- Háblame sobre sus actividades diarias y como las acomoda con la interacción en la clínica para TB. ¿Como se acomoda las actividades en el día con el tratamiento que recibe/recibió para la TB?
- Háblame que pasa cada vez que viene a la clínica.
- ¿Cuales son los beneficios del programa que le ofrecen a Usted?
- ¿Cuales son las dificultades que experimenta en la clínica?
- ¿Cuales son las dificultades que se encuentran antes de que llegue/venga a la clínica?
- Cuales son las diferencias dentro del cuidado que recibe ahora en comparición con el período antes de participar en el PCT? (APUNTE: Como maneja el tratamiento para TB en su vida? Hay una diferencia en comparición con el tiempo antes de que recibiera tratamiento? Si la hay, como ha mejorado? Como no ha mejorado?)
- A partir de 2004, se ha observado una mejora o cambio en su comunidad con respecto a la clínica de TB? Si es así, descríbame cuales son éstas cambios.
- Que tipas de personas en su comunidad tienen acceso a los servicios para TB? (APUNTE: Como conoció a la clínica? Las otras personas de la comunidad saben venir a la clínica si tienen una experiencia similar? Vienen a la clínica si tienen una experiencia similar? Si vienen, en que vienen (transporte)? Si no vienen, por que no?)
- Háblame de si y como ha cambiado el acceso a los servicios para TB recientemente? (APUNTE: Todo el pueblo tiene acceso? Tienen que pagar para tener un diagnóstico? Si tienen que pagar, todo el pueblo lo puede hacer? Los gastos no facilitan a algunas personas al acceso? Como vienen las personas a la clínica? La distancia/transporte son una barrera para el acceso? Si es una barrera, que cambiaría para desecharla?)

Tema II: Los Sistemas en Salud

- ¿Fue a un medico privado antes de que entró el programa de TB? Descríbame su experiencia con eso--¿cómo llegó aquí como 'paciente' en el programa de TB?
- Háblame de las diferencias dentro de éste programa y sus experiencias con los servicios privados?

Tema III: Los Derechos en Salud

- Descríbame las circunstancias o cosas en su vida que contribuyeron a su enfermedad (TB).
- Háblame de las cosas (situaciones, políticas) que Usted cree que tal vez pudieron haber prevenido la TB.
- Que cree que sea necesario para facilitar la salud del pueblo en su comunidad? Y para prevenir la TB? ¿Que cosas ya están y que hace falta?
- Háblame de lo que cree que pone enfermo(a) y lo que pone mejor.
- Muchas personas crean que hay cosas en la vida que contribuyen a su salud y cualquier enfermedad que se encuentren. (Enséñale las tarjetas de apuntes para las vulnerabilidades a TB) Háblame de como tener o no tener estas cosas pone bien o que pone enfermo(a)

Preguntas Abiertas

¿Hay otras cosas o cuestiones en los que no hemos hablado que crea son importante para discutir?
¿Hay preguntas que tiene para mi como la investigadora?

Guía para las/los Personal de Salud

Información General

- Descríbame un poco sobre sus experiencias profesionales, como su educación y trabajo antecedente.
- Como describiría su papel en relación al FM.
- Como describiría el papel del FM en Nicaragua.

Tema I: Programa del Control de la Tuberculosis

- Dígame lo que incluye en su diario trabajo al clínico.
- ¿Cuales son los cosas diferentes que necesita hacer como un personaje de salud en ésta clínica?
- Descríbame los características o acontecimientos comunes que vea en los receptores del PCT.
- ¿Como es el acceso al programa en su comunidad/región? (APUNTE: Todo el pueblo tiene acceso? Tiene que pagar para estar diagnóstico? Si tiene que pagar, todo el pueblo lo puede hacer? Los gastos previene a algunos en el acceso? Como vienen las personas a la clínica? Eso existe como una barrera? Si es una barrera, que cambiaría para removerla?) Dígame si y como ha cambiado el acceso al servicios para TB recientemente?
- Descríbame las maneras en las que su clínica encuentra los casos de TB. (APUNTE: La educación publica acerca los síntomas está incluido dentro el programa? Si está, como le perece? Y si no está, por que crea Ud. que no está?)
- ¿Quienes son las personas que están beneficiando del FM en la comunidad? (Acceso) (APUNTE: Como conocían a la clínica? Las otras personas de la comunidad saben venir a la clínica si tengan una experiencia similar? Vengan a la clínica si tengan una experiencia similar? Si vengan, como (transporte)? Si no vengan, por que no?)
- ¿Cuales son las diferencias acerca la control de TB en Nicaragua en comparación e antes la subvención del FM? (APUNTE: Como ha cambiado el numero de los casos? Como los encuentra a los casos sintomáticos (fiebre, pedido del peso, cansado, y tos por tres semanas)? Los individuos diagnósticos están recibiendo el tratamiento? Si están, quienes son? Si no, quienes son y por que?)
- ¿Cuales son las fuerzas que vea en el apoyo del FM para su clínica?

Tema II: Los Sistemas en Salud

- Dígame la diferencia dentro éste programa y su experiencia con cuidado privado. (APUNTE: Han desarrollado métodos para trabajar con el sector privado? Si han desarrollado, ¿como lo perece? Si no, ¿por que?)
- ¿Ha fijado cambios o movimientos del personal en salud entro los sectores públicos y privados después del recibo de la subvención del FM? ¿Cómo es?
- El FM apoya la colaboración dentro de los sectores públicos y privados en salud. Descríbame las experiencias que ha tenido con servicios o sectores privados y éste programa nacional de control.. (APUNTE: Recibe pacientes mandado por médicos privados? Crea que los médicos privados están mandando pacientes? Como funciona la relación entre ustedes, como personal de salud en un programa publico, y el sector privado?)
- ¿Han beneficiado otros programas o servicios en salud como resultado o impacto del FM? Dígame acera los beneficios y los desafíos que otros servicios en salud se han encontrado después del recibo de la subvención del FM? (APUNTE: La existencia de la subvención ha mejorado a otros programas? Existe algunos asociaciones con otros programas?)

Tema III: Los Derechos en Salud

- ¿Que piense necesita la comunidad para facilitar la salud del pueblo? Y ¿para prevenir la TB?
- Muchas personas crean que hay cosas en la vida que contribuyen e ambos su salud y cualquier enfermedades que se encuentren. (Enséñale las tarjetas de apuntes para las vulnerabilidades a TB) Dígame como tener o no tener estas cosas se pone bien y que se pone enfermo(a) la población.

Preguntas Abiertas

- ¿Hay otras cosas o cuestiones en los que no hemos hablado que crea son importante para discutir?
- ¿Hay preguntas que tiene para mi como la investigadora?

Guía para las/los Administradores

Información General

- Descríbame un poco sobre sus experiencias profesionales, como su educación y trabajo antecedente.
- Descríbame su papel en relación al FM.
- Descríbame como se parece el papel del FM en Nicaragua.

Tema I: Programa del Control de la Tuberculosis

- Podría decirme de lo que está incluido en el diario trabajo o diaria interacción con el PCT?
- Cuales son las cosas diferentes que Usted necesita hacer en relación al PCT?
- Cuales son las cosas diarias o regulares a las que hace frente como administrador(a) en relación al FM o PCT?
- Descríbame las maneras en las que las clínicas encuentran los casos de TB. (APUNTE: La educación publica acerca los síntomas está incluido dentro el programa? Si está, como le perece? Y si no está, por que crea Usted que no está?
- Descríbame los características o acontecimientos comunes que vea en los receptores del PCT?
- Quienes son las personas que están beneficiando del FM en la comunidad? (Acceso) (APUNTE: Como conocían a la clínica? Las otras personas de la comunidad saben venir a la clínica si tengan una experiencia similar? Vengan a la clínica si tengan una experiencia similar? Si vengan, como (transporte)? Si no vengan, por que no?)
- Dígame como ha cambiado el acceso al servicios para TB recientemente? (APUNTE: Todo el pueblo tiene acceso? Tiene que pagar para estar diagnóstico? Si tiene que pagar, todo el pueblo lo puede hacer? Los gastos previene a algunos en el acceso? Como vienen las personas a la clínica? Eso existe como una barrera? Si es una barrera, que cambiaría para removerla?)
- Cuales son las diferencias acerca la control de TB en Nicaragua en comparación e antes la subvención del FM? (APUNTE: Como ha cambiado el numero de los casos? Como los encuentra a los casos sintomáticos (fiebre, pedido del peso, cansado, y toz po tres semanas)? Los individuos diagnósticos están recibiendo el tratamiento? Si están, quienes son? Si no, quienes son y por que?)
- Cuales son las fuerzas vea en el apoyo del FM para las clínicas y para el PCT?
- Que piense necesitan en las comunidades servidos del PCT para realizar la salud del pueblo? Y para prevenir la TB?

Tema II: Los Sistemas en Salud

- Dígame la diferencia dentro éste programa y su experiencia con cuidado privado. (APUNTE: Han desarrollado métodos para trabajar con el sector privado? Si han desarrollado, como lo perece? Si no, por que?)
- El FM promociona la colaboración dentro de los sectores públicos y privados en salud. Descríbame las experiencias con servicios o sectores privados y éste PCT.
- Han beneficiado otros programas o servicios en salud como resultado o impacto del FM?
- Dígame alrededor los beneficios y los desafíos que otros servicios en salud se han encontrado después del recibo de la subvención del FM? (APUNTE: La existencia de la subvención ha mejorado a otros programas? Existe algunos asociaciones con otros programas?)
- Dígame los cambios que se ha fijado en el movimiento del personal en salud entro los sectores públicos y privados después del recibo de la subvención del FM?

Tema III: Los Derechos en Salud

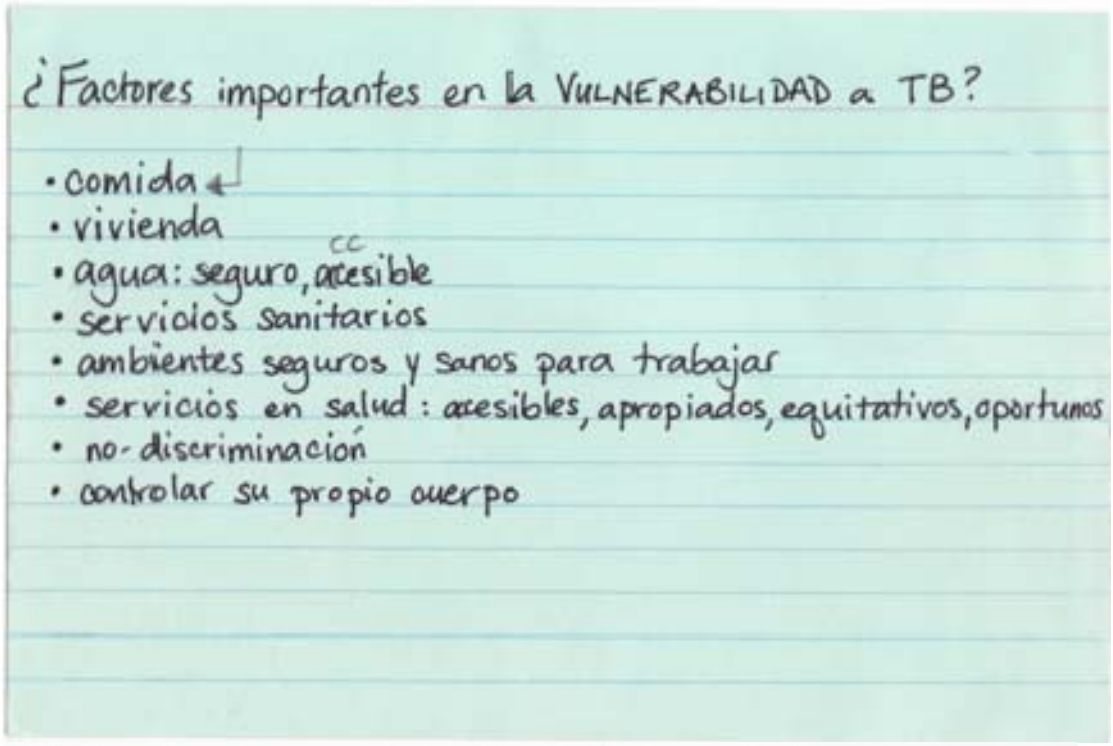
- Muchas personas crean que hay cosas en la vida que contribuyen e ambos su salud y cualquier enfermedades que se encuentren. (Enséñale las tarjetas de apuntes para las vulnerabilidades a TB) Dígame como tener o no tener estas cosas se pone bien y que se pone enfermo(a) la población.
- Cuales son las formas de dirigir (o que podría dirigir) estos factores a través del PCT y el FM?

Preguntas Abiertas

- Hay otras cosas o cuestiones en los que no hemos hablado que crea son importante para discutir?
- Hay preguntas que tiene para mi como la investigadora?

Appendix C

Health Rights Cue Card



Appendix D

Focus Group Package

Paquete: Actividad Grupal
CONAPAT
El Fondo Global y la Tuberculosis en Nicaragua: Vinculando políticas globales con experiencias locales

El paquete incluye lo siguiente:

1. Una invitación a participar en el estudio a través de una actividad grupal. La invitación provee información sobre el estudio.

2. Una lista de las preguntas para discusión en la actividad.

3. Una copia del formato de consentimiento para la actividad para que Ustedes puedan leerlas con anticipación. Este formato cumple los requisitos de la comité ética y sirve para proteger su derecho a confidencialidad. Por favor, nota la sección **"Confidencialidad"**. Actividades en grupo son casos especiales en la protección de la confidencialidad de participantes porque nadie puede asegurar el comportamiento de otros participantes. Hay que respetar la confidencialidad de cada participante en el grupo por no hablar ni discutir las cosas dichos durante la actividad afuera de la CONAPAT. Katrina va a pedirle firmar una copia antes de que comencemos la actividad. La copia que tiene aquí es la suya.

4. Una tarjeta de contacto para Katrina Plamondon, la investigadora del estudio. Ella estará en Nicaragua hasta el 20 de abril y regresará por el mes de septiembre. Lo mejor forma de contactarla en los meses entre mayo y agosto es por email: **katrinap@sasktel.net**

Actividad Grupal
CONAPAT
El Fondo Global y la Tuberculosis en Nicaragua: Vinculando políticas globales con experiencias locales

¡Saludos a todos y todas los miembros de la CONAPAT!

Es un placer extenderles una invitación a participar en una **actividad grupal** para el estudio titulado **"El Fondo Global y la Tuberculosis en Nicaragua: Vinculando políticas globales con experiencias locales"**.

Algunos de ustedes ya me conocen y para los que no he encontrado antes, quiero presentarme y describirles un poco más sobre el estudio. Soy enfermera licenciada de Canadá y estoy sacando mi maestría graduado en salud comunitaria y epidemiología. La Universidad de Saskatchewan en Canadá tiene una relación con el CIES y a través de eso, estoy trabajando con el apoyo de Dr. Alejandro Solís. El estudio es cualitativo en su naturaleza. Está enfocando a las experiencias que han tenido los personajes vinculados al Programa Nacional de Control de Tuberculosis con relación al Fondo Global.

Quiero explorar **sus experiencias, entendimientos y comentarios**. Ustedes, como la CONAPAT representan un amplio grupo de personas que trabajan para la TB en Nicaragua. Yo creo que ustedes tienen una buena perspectiva del contexto de Nicaragua y pueden dar una contribución valiosa al estudio.

La actividad será como un grupo de foco. Vamos a discutir unas preguntas específicas a las que cada persona podrá responder. He colocado estas preguntas en su paquete. Me gustaría que tengan ustedes la oportunidad pensar en estas preguntas antes de la actividad.

La actividad estará en el CIES el día _____ de abril del año 2006.

¡Muchas gracias! ¡Nos vemos pronto, será un placer encontrarme con Ustedes!

Atentamente,

Katrina Plamondon, RN BN MSc (candidata)
Strategic Training Fellow, Community & Population Health Research Training Program

Preguntas para la Actividad Grupal

Las preguntas abajo serán discutidas en la actividad grupal. Cada participante podrá responder cada pregunta. Por favor, **léalas con anticipación.** Ustedes tendrán un espacio para anotar sus comentarios mientras las leen. No tiene que contestar a cada pregunta, pero favor no tenga dudas en compartir sus pensamientos, críticas y sugerencias. Recuerde que el propósito de la actividad es explorar sus experiencias propias. **No hay respuestas correctas ni respuestas incorrectas—cada persona tiene experiencias y conocimientos valerosos que pueden contribuir al estudio**. ¡Muchas Gracias!

1. El proyecto del Fondo Global tiene una duración de cinco años. ¿Qué significa este financiamiento y proyecto para la sostenibilidad en atención a la tuberculosis en el país?

2. Muchos participantes en el grupo administrativo han mencionado que el proceso de organizarse, solicitar y satisfacer los requisitos del Fondo Global ha sido costoso desde diversos puntos de vista. ¿Cómo podríamos continuar para mejorar la comunicación entre Nicaragua y el fondo global con el fin de reducir estos costos?

3. Varios participantes sentían que la TB no está contemplada como una prioridad en el país, que otras campañas, como la de Rubéola, toman la energía y tiempo mientras actividades para la TB han sido puestas de lado. ¿Cómo pueden, el Fondo Global o la CONAPAT dirigir o apoyar cambios para este desafío interno?

4. Muchos participantes decían que la relación colaborativa entre los sectores privados y públicos ha mejorado como resultado del proyecto del Fondo Global. También sugirieron que esto es un área en que todavía hay espacio para mejoras. ¿Cómo siente que la participación por los múltiples sectores de salud pueda ser facilitada?

5. Algunas dificultades experimentadas por personas involucradas con este estudio, han sido enfocadas a través de los siguientes temas: Primero, el movimiento de los fondos es demasiado lento y como resultado, hay presión para cumplir actividades en menos tiempo del que fuera contemplado. Segundo, los indicadores e informes requeridos por el Fondo Global no

siempre caen bien con las actividades normales y estándares internacionales en el control de la TB. ¿Representan estos dos aspectos, reales desafíos que Nicaragua ha tenido que enfrentar con el fondo global? ¿Cómo podríamos superarlos?

6. Si estas no son las dificultades que usted reconoce como las más importantes para superar, ¿cuáles son? y ¿cómo podríamos superarlas?

7. ¿Qué aspectos de las políticas del Fondo Global, para las subvenciones y los mecanismos estructurales, podrían mejorarse para facilitar los procesos de comunicación y flexibilización adaptadas a la realidad de Nicaragua? (Esto incluye: mecanismo de coordinación del país, receptor principal, agente local de fondo y panel de revisión técnica)

8. ¿Qué procedimiento sugiere para la presentación de los resultados de esta investigación? Por ejemplo, un taller, un foro nacional, un documento, u otro.

Appendix E

Original Quotes with Translation

Page	Original Quote	Translated Quote
92	Nicaragua tiene en el campo de salud, muy poco inversiones. Inversiones muy pequeños. Los últimos datos hablan de que Nicaragua se invierten alrededor de veinte dólares al año por capita desde lo publico. Y que en total, el país invierta uno 177-78 dólares al año. Estamos hablando de una inversión muy pequeño. En un país que tiene casi dos tercera parte de la población en pobreza y con un casi 17-18 por ciento en extrema pobreza, estamos hablando de una población, entonces, que tiene muchas necesidades. Y que no tiene capacidad para resolverlo.	In the field of health, Nicaragua has very few investments…very small investments. The latest data say that per year, Nicaragua invests around twenty [US] dollars per capita from the public [sector]. And, in total, the country invests some 177-78 [US] dollars per year. We're talking about a very small investment. In a country that has almost two thirds of the population [living] in poverty and with almost 17-18 per cent in extreme poverty, we're talking about a population that has many needs. And [the country] has no capacity to resolve it.
94	No se da cuenta que la cuestión de salud no es de las prioridades en la agenda nacional. Y usted puede ver…tenemos mas de tres meses en medio de huelga medica actualmente en el país. Y pareciera que no pasa nada! Verdad? Da la sensación que no pasa nada! … el gobierno se queda tranquilo, y no está pasando nada. Para un ejemplo…se discutirlo el sistema es un no-prioridad. Yo creo que hay conciencia de que el sistema es in-equitativo. Hay conciencia de que el sistema es ineficiente. Hay conciencia que el sistema no está resolviendo en una manera efectiva los problemas del país, pero tampoco no hay mucha…no es la prioridad…Y yo no…allí no diría yo solo de las autoridades nacionales. Yo siento que en el país hay otras prioridades. Se esta discutiendo otras prioridades. [Tal vez porque hay]…demasiado elementos en la discusión de la agenda nacional, y al final, salud termina como octavo, décimo lugar, pues. De hecho interesante que en algunas encuestas de opinión, no siempre…o mejor dicho casi nunca parece la salud como la primer preocupación.	One doesn't realize that the issue of health is not among the priorities on the national agenda. And you can see…in the country, we've actually been in the middle of a medical strike for more than three months…and it would seem that nothing has happened! Right? It gives the sensation that nothing happens! …the government sits back and nothing is happening…as an example…this illustrates that the [health] system is a non-priority. I believe that there is awareness that the system is inequitable. There is awareness that the system is inefficient. There is awareness that the system is not resolving the country's problems in an effective way; but, at the same time…it's not the priority…and I would say there, not just among national authorities. I feel that in the country, there are other priorities. They are talking about other priorities…[perhaps] because there are too many…elements in the discussion of the national agenda, and in the end, health ends up in eighth, tenth place. In fact, interestingly, in some public opinion polls health not always, or better I say almost never appears as a primary concern.
94	La verdad de las cosas es de que el programa de tuberculosis…era un programa que no recibía financiamiento…para…ejecutar su actividades. Por ejemplo…el programa de vacuna?...recibe financiamiento de todo el mundo. Si es…este…la atención…materno infantil…tiene un montón de oficinas…es increíble…todo lo que tienen el materno infantil…y el financiamiento que reciben…para planificación familiar…para atención embarazada…capacitación de partera…este…capacitación en emergencia obstétrica…en el área rural…pero la tuberculosis, no.	The truth of the matter is that the tuberculosis program…was a program that didn't receive financing…to carry out its activities. For example, the vaccination program? [It] receives financing from everywhere…there's the attention in maternal-child [health]…they have a ton of offices…it's incredible, all that they have—the maternal child health and the funding that they receive for family planning, for pregnancy care…for training in emergency obstetrics for rural areas…but tuberculosis, no.
96	…este es el mayor impacto que hemos tenido, los club de pacientes. Ha mejorado la detección, estamos detectando más tosedores, no quiere decir	…this is the greatest impact we've had, the TB Clubs. They've improved the detection, we are detecting more coughers, that's not to say patients

	pacientes con tuberculosis; tosedores sintomáticos para poderlos examinar.	with TB, but symptomatic coughers so that they can be examined.
97	Ha mejorado, ha aumentado un poquito, pero seguimos bajos, hay que trabajar fuerte en esto porque ahí está una de las debilidades que actualmente tenemos, en realidad tenemos baja capacidad, porque tenemos una población grande y ahí es donde hemos estado insistiendo a los municipios que mejoren la captación…	...it's [case detection] improved, it's increased a little, but we continue with low rates. We have to work hard on this because this is actually one of the weakness we have, in reality we have little capacity because we have a large population…this is where we've been stressing the importance to the municipalities so that they work to improve the capture [of TB cases]…
97	…aquí…éramos uno de los SILAIS que teníamos alta incidencia de abandono, altas tasas de abandono y últimamente hemos logrado disminuir estos abandonos; yo considero que es parte del resultado de las intervenciones que se han venido haciendo [el Fondo Mundial].	…here…we were one of the regions that had high incidence of abandonment, high rates of abandonment, and ultimately we've been able to reduce these defaluters. I consider this to be part of the result of the interventions that they've [the Global Fund Project] come to do.
101	"…habla el mismo lenguaje…"	…speak the same language…
101	Es algo nuevo, las presentaciones de cada uno, contar nosotros las experiencias que hemos vivido en cada año, porque antes sólo entregaba esto. Yo se lo mandaba a la MINSA central ya lo recibía y ya esta. No hacíamos evaluaciones, análisis, de que cómo estoy, de que qué pienso, qué hago, el fortalecimiento administrativo no lo teníamos…	…It's something new, the presentations of each [health region]…to tell each other about the experiences we've lived in the year, because before we only sent in this [folder]. I sent it to MINSA central and they received and that was it. We didn't do evaluations or analysis about how I [the regional office] am, of what I think and do…we didn't have this administrative forte…
101	Aquí hay muchas cosas que necesitamos, por ejemplo el programa necesita una computadora, porque como vos sabés, todos esos papeles deben ir escritos a máquina. [Entonces] la vez pasada que me pidieron un informe en el SILAIS, entonces yo lo lleve escrito a máquina y me lo regresaron. Yo no se escribir en computadora le dije….No la tenemos, entonces me ha tocado ir a pagar a los cyberes para que me hagan los trabajos…de mi bolsa…	…here there are many things that we need…for example, the program needs a computer because, as you know, all of the papers should be [done on a] word processor…so the last time the regional office asked me for a report I sent it to them typed [on a type-writer] and they sent it back to me. I don't now how to type on a computer, I told them. [But] we don't have [a computer]…so I've had to go and pay [from my pocket] at a cyber café so that they would do the work for me…
102	Hemos fortalecido o mejorado la capacidad diagnóstica de los laboratorios, con la compra de microscopios, repuestos para microscopios…	…we've strengthened or improved the diagnostic capacity of the laboratories with the purchase of microscopes, replacements for microscopes…
102	Yo tengo problemas con una unidad de salud hasta alli…Que no sirve el laboratorio, están malos, o sea, ella lo hace pero de una forma riesgoso, porque el local es bien chiquito, yo llegué y meré y digo, ella tiene razón. Porque estamos pensando en que ella se puede infectar, pero sin embargo tratan de hacerlo, pero hacen poco por lo que ella no se somete a tanto, por que no tiene ventilacion…entonces decía, tal vez una partida del Fondo Global, porque se podría hacer el cuarto del laboratorio, o un cuartito pequeño que de las condiciones, un poquito más grande, ampliarlo	…I have problems with one health post over there…the laboratory is no good, they're in bad shape…or that is, she [the lab technician] does it [smear microscopy] but it's very risky because the location is very small…I went and saw it and said, 'she's right'. Because we're thinking that she could become infected, but they're still trying to do it…but they do very little so that she isn't exposed too much, because it has no ventilation…so I said, perhaps [there could be] some help from the Global Fund, because they could make a small laboratory room, or a small room where the conditions [were] a little

		bigger…to expand it…
103	Entonces…las mismas autoridades en salud, no les hacen caso a la tuberculosis. Eso es uno de los debilidades que tenemos, dentro del sistema.	…even the health authorities don't pay attention to tuberculosis…it's one of the weakness we have within the system…
103	el Fondo Global, apoya el programa de tuberculosis, es un apoyo muy específico a un programa, pero éste programa está inmerso, está integrado en un sistema de salud, donde hay otros programas que son mucho más prioritarios, materno-infantil, en primer lugar. Entonces, está inmerso en un sistema de salud, en una organización de servicio de salud que tiene muchas deficiencias y el programa ahí está, donde el programa recibe todos los golpes y todas las deficiencias del mismo sistema, tanto en la calidad como en cantidad de… en los recursos que hay.	…the Global Fund supports the TB program, it is a support very specifically directed at one program…but this program is immersed, it is integrated in a health system where other programs are given much greater priority--maternal-child health, for starters. So, it is immersed in a health system, in an organization of health services that has many deficiencies, and there the program sits…where the program receives all of the punches and deficiencies of the same system, as much in quality as in the quantity of the resources around…
104	Que realmente a mí me decepciona un poco lo que son las políticas de Nicaragua. Y esto lo comentamos mucho con varios colegas, las políticas de salud no tienen un paquete aparte para esto…las políticas digan: no, es que no podemos priorizar, tenemos que priorizar materno-infantil, hay muerte materna, pero hay también pacientes afectados [por TB]. Entonces ¿qué es lo que pasa?, por las políticas de Nicaragua, sólo podemos opinar, porque sólo los gobernantes que están arriba pueden trazar su eje en todo lo que vas a hacer. Por eso, si vos te pones a revisar la política de Nicaragua, vas a ver la tuberculosis, adónde está, allá esta. Al fondo al fondo y talvez dos o tres actividades	…What really disappoints me a little are Nicaraguan politics. And we talk about this a lot with other colleagues—the health policies don't have a separate package for this…the policies say 'no, we have to prioritize', we have to prioritize maternal-child health, there's maternal mortality-- but there are also patients affected [by TB]. So, what happens? With Nicaraguan policy, we can only have an opinion, because only the leaders on top have the power to outline their [budgeting] plans about what you're going to do. Because of this, if you start looking at Nicaraguan policy, you'll see tuberculosis…where is it? There it is…at the very bottom…the very end with maybe two or three activities…
104-105	es una visión que va más allá, termina el proyecto pero no termina ahí CONAPAT…esto es algo que también con el MCP, y lo siento así verdad; que al finalizar y como parte de sus funciones el MCP, es que es eso, no? De buscar otros aliados, de buscar otros donantes y que estas sean estructuras que como país se puedan mantener.	…it is a vision that doesn't stop here…the project will come to an end, but the CONAPAT won't stop there…this is something with the CCM too, and I feel this is true—that it is part of finalizing its role as a CCM, this is it…to search for other alliances, to find other donors and it will be these structures that, as a country, will be able to maintain this…
105	la idea era crear un espacio de foro donde se pudiera discutir…tanto llegamos los problemática nacional relacionada con el tema de tuberculosis, malaria, SIDA…y, al mismo tiempo, de construir un mecanismo de ser un poco mas eficiente. Digamos tener actores con distintas…con distintas visiones sobre la problemática nacional, ahora, que entiendo es que…es que una vez…de comienzo a funcionar, en la practica mostró algunas dificultades. Por un lado, por un lado…eh…que un mecanismo de este tipo sea primero designado con anticipación. Que quiero decir—en Nicaragua, por el hecho de que…hay	…the idea was to create a forum space where you could discuss…national issues related to the themes of TB, malaria and AIDS…and, at the same time, to construct a more efficient mechanism...but we have actors with different…visions about these national issues…and now, from what I understand, once it started to function, in practice, some functional difficulties began to appear, on one hand. On one hand…that a mechanism such as this should first have anticipated [role] designations…in Nicaragua, the fact is that

	muchas discusiones sobre la forma de participación…eh…hay muchas experiencias sobre el tema de la participación. Eso es un tema que….que…que elabora de crear un mecanismo de este naturaleza, si no…si no es muy bien designado, eso este, esta designo mismo es el primero causante de las tensiones.	there have been many discussions about participation…there are many experiences around the theme of participation…in order to create a mechanism of this nature, if it is not well defined, then the very design [of the mechanism] becomes the main source of tension…
105	Que pasa por eso..por la lucha de poder [entre acotres]?…que algunas veces, eh…aparentemente son de funciones técnicas…pero se está discutiendo realmente quien decida. Ya? Entonces, eso…tiene que haber como…como…como una capacidad muy buena para poder conducir esta procesos que son del proyecto…hay una dificultad que se los actores se pone de acuerdo—muy grande…para eso necesita un liderazgo…un agenda de ideas. Y yo he percibido como consultor de que estos procesos no ocurren….no ocurren. Hay un liderazgo débil de las autoridades nacional que algunas veces dificultan esta descripción…esta diseño. Y a final, termina haciendo a una…una decisión muy autocrática a nivel gubernme..no-gubernamental, o muy democrática pero al final, no es práctica. ¿Ya? Entonces, no se puede estar en ninguno de los extremos. Hay que…hay que primera a que los grupos aprenden a negociar, a consensuar. Yo creo que el mecanismo de coordinación es un buen ejemplo de eso…eso fenómeno.	…what happens because of the power struggle [between actors]? Sometimes, in what seem to be technical discussions, they are really talking about who gets to decide. So then this has to do with having a well-developed capacity to drive the project's processes…getting actors to agree is a very big challenge…for this, you need leadership…an agenda of ideas. As a consultant, I've felt that these processes don't move forward…they don't move forward. There is weak leadership among national authorities that, at times, makes the description [of roles], and this design, difficult. And in the end, they end up making a very autocratic decision at the non-governmental level or very democratic, but in the end, it isn't practical. So, it can't be in either of the extremes. The groups need first to learn how to negotiate, to come to consensus. I think the country coordinating mechanism is a good example of this phenomenon.
106	…toda la sociedad en su conjunto recibe beneficios, todos. Porque no tenemos ninguna atención particular para algún grupo, sino que ofertamos a todo mundo el tratamiento, el diagnóstico y la campaña que nosotros hemos hecho en la radio, en la televisión, va dirigida a toda la sociedad. Lógicamente, hacemos más actividades en los sitios de mayor pobreza, de mayor incidencia, pero va dirigido a todo el mundo	...all of society as a whole, everyone [benefits]. Because we don't provide health services to any exclusive group, rather we offer treatment and diagnosis to everyone and the campaign that we've had on the radio, on television is directed at all of society. Logically we have more activities in areas where there is more poverty and greater incidence, but it is aimed at everyone...
106-107	Pacientes, el programa da aceptación a los pacientes y después a la comunidad, porque ellos van a ser portavoces del conocimiento que les estamos dando, por los conocimientos que el Fondo Global está haciendo…. El fortalecimiento que tiene la red, la red comunitaria, que es lo principal junto con nosotros. Fortalecer esa red… para la prevención y la promoción.	…first, patients…the program accepts patients and next, the community…because they [the patients] are going to be spokespersons for the teaching that we're doing…for the knowledge that the Global Fund is supporting...the strength is in this network…the community network--that is the most important thing together with us [the nurses]…strengthen this network for prevention and promotion…
107	…la comunidad en sí, porque identificando un caso van a mejorar su salud…	…the community itself [benefits] because identifying one case is going to improve its health…
107	…si tú logras mejorar tu tasa de curación y logras disminuir la cadena de la transmisión, romper la transmisión y claro tú logras disminuir la incidencia de la tuberculosis y eso favorece en primer lugar a la población pobre porque va a	…if you achieve an improvement in your case detection rate, and you manage to reduce the chain of transmission--break the chain of transmission, then of course you'll reduce the incidence of tuberculosis

	sufrir menos de tuberculosis…	and, first of all, this benefits the population who are poor because they will suffer from tuberculosis less…
108	en primer lugar el personal de salud, porque el personal de salud recibe capacitaciones, puede mejorar su desempeño, nivel técnico, nivel gerencial en este programa, puede obtener más información correcta, entonces el personal de salud es un grupo meta importante	…first of all, it is the health personnel [benefiting] because the health personnel receive training, they can improve their standing in the program, technical level, managerial level in the program…so, the health personnel are an important target group…
108	**…**porque cuando, por ejemplo, como los capacitamos, ellos quedan con mejor experiencia para su programa, están mejor preparados para enfrentar cualquier problema o debilidad que tiene el programa, la capacitación les sirve para eso, para ayudarlos, refrescarlos, refrescamiento en conocimiento	…because, when, for example, we train them [the people responsible for the program], they leave with a better experience for their program, they are better prepared to cope with whatever problem or weakness the program has…the training is there for this…to help them, to update them...update their knowledge…
109	Nos estuvieron dando ayuda, unos bonos para las provisiones. Ayudaba…se nos daban cada semana. Y aquí me dijeron que no podía trabajar mucho, por lo menos en un año no podía trabajar. Entonces, sólo ella [mi esposa] trabajaba porque tenemos cuatro niños y el paquete que ella nos daba, ayudaba bastante para los niños y todo.	…they were giving us some aid…some bonuses for supplies…it helped…[they gave them to us] every week. And here they told me I couldn't work much, for at least a year I couldn't work. So, only [my wife] worked because we have four children and the package that she [the nurse] gave us helped a lot…for the children and everything…
109	…fíjese que esa alimentación ellos mismos dicen de que nunca cortaran esa alimentación…en todos los países está la pobreza, igual aquí existe la pobreza y por lo general los pacientes más vulnerables son los que tienen escasos factores económicos, a veces no tienen ni para el transporte. Hoy mire me vino un paciente,… qué le pasó? 'Me pasó muchas cosas no me salió dinero del sueldo, no sé por qué, vengo a que me ayude'…no le pude solucionar porque yo no tengo bono, entonces él venía con la esperanza de encontrar bono para poderse ayudar. No pude hacer nada…	…notice that with this food…they [PATB] themselves ask that it is never cut off…this food….in all of the countries where there is poverty…here there is poverty too…and generally the most vulnerable patients are those that have scarce economic resources…sometimes they don't even have enough for transportation. Today a patient came to me—what happened to him? [He said,] 'Many things happened to me and then I never got the money from my salary…I don't know why…I came here hoping you could help'. But I couldn't help him because I didn't have any bonuses left…but he came with the hope of finding a bonus so he could be able to support himself. I couldn't do anything…
109	…por eso no nos han hecho abandono, por ese paquete que mantiene, eso les decía yo a las señoras del SILAIS, ojalá que no lo quitaran porque los pacientes no están fallando, por el paquete que tenemos.	…because of this they haven't abandoned the program, for this package keeps them here…I said this to the regional administrators, let's hope they don't take it away because the patients aren't failing [treatment] because of these packages that we have…
110	…la verdad de las cosas es que la población necesita bastante atención directamente por lo inaccesible que ya tenemos entre trabajo…era andar 22 días de caballo!...Si…22 días de caballo…dando atenciones…cada tres días nosotros cambiamos de comunidades…habían ocho comunidades que teníamos que atender…	…the truth is that the population needs a lot of directly delivered services because of the inaccessibility that we have to work with…it was twenty-two days on horseback! Yes, twenty-two days on horseback…providing care…every three days we would change communities…there were eight communities that we were visiting…

110	Ese muchachito, ahí donde los ves viene desde un infierno que vive en un lugar…él vive por un corral de vacas y hay que caminar, no tenés idea, por unos pedregales que ni quiera Dios. Hay que caminar como media hora a pie para ir donde vive ese chavalo, desde donde te deja el bus. Y es un camino incómodo, hay que pasar por un corral de donde hay ganado, vacas encerradas. Tenés que pasar por todo eso para llegar a la casa de él.	…this young guy that you saw here comes from a hell of a place where he lives...he lives beside a field of cows and has to walk…you've got no idea…for some god-awful, rocky paths. You have to walk maybe half an hour on foot just to get from the bus stop to where this kid lives. And it's an awkward path…you have to walk through a corral where there is livestock…corralled cows…you have to walk through all of this to get to his house…
111	…en Nicaragua, yo diría que casi un setenta por ciento de los recursos están en el Pacifico. En el país, hay graves problemas de recursos humanos en la costa Atlánticas, en la zona del norte del país….y eso…eso dificulta…dificulta mucho que hay un oferta mal calificada.	…in Nicaragua, I'd say that around seventy percent of the resources are in the Pacific. In the country, there are serious problems with human resources in the Atlantic coast, in the northern part of the country…and this makes it hard…it complicates things…much of what is offered is poorly qualified…
111	es que ha venido apoyarnos mucho el FG con la compaña de información, educación y comunicación a la población...la reproducción de…de…materiales educativos…incluso en nuestro lengua…que no es siempre español…hay materiales en Moskito…hay materiales en ingles…por que…este…bueno…para trabajar en neustro pais, no solamente es español que hablen. Hay comunidades en las que solamente hablan Moskito. No entienden para nada el español ni ingles. Moskito. Entonces…si nosotros querremos hacer un impacto a la población…educar, informar, comunicar a la población…tiene que hacerlo en su lengua materna…y este…eso ellos ha venido a apoyar bastante…	…the Global Fund has come to help us a lot in the education campaign, education and communication to the population…the reproduction of educational materials…including in our language…which isn't always Spanish…there are materials in Moskito…there are materials in English…because, well, to work in our country, it isn't just Spanish that is spoken. There are communities where they only speak Moskito. They don't understand Spanish or English at all. Moskito. So, if we want to have an impact on the population…to educate, to inform, to communicate with the population…you have to do it in their mother tongue…and with this, they've come to help a lot…
111	A veces era difícil venir a la clínica…A veces por falta de dinero para tomar el bus, porque a veces, como le digo, no podía caminar demasiado, me cansaba y a veces no tenía plata y mi mamá y ella tenían que arreglárselas para darme para taxi	…sometimes it was difficult to come to the clinic because I didn't have money to take the bus…because sometimes, like I said, I couldn't walk too much…it made me too tired and I didn't have money so my mom and [wife] had to sort it out as best they could to bring me in a taxi…
112	La mayoría de las veces, los pobrecitos. A veces no asisten a la cita porque no tienen dinero. Cuando no hay trabajo, la época que más hay dinero, entonces a ellos no se les dificulta, la época de la cosecha de café	…the majority of times, the poor things, they [PATB] don't come to their appointments because they don't have any money when there is no work… during the coffee harvest, the time when there is more money, it's not so bad for them…
112-113	Últimamente, cuando yo comencé, yo nunca pensé que yo tenía algo de eso, pero a mí no me lo dijo nadie, simplemente yo tuve primero esa tos…Yo comencé y salí a buscar adónde voy a ir, adónde, adónde. Porque yo busqué y busqué medicamento y no encontré ayuda cerca. Yo estuve buen tiempo buscando a alguien, ¡Uh! Tuve buen tiempo con esa tos y sudaba y el frío que me daba ahí. Y busqué y me daban medicamento pero no me hacía nada. No	…Ultimately, when I first was sick, I never thought that I had something like this…but nobody ever said anything about it to me…first, I simply had this cough…I started and went out looking for where I should go…where, where? Because I looked and looked for medicine and I didn't find anything that came even close to helping. I spent a long time looking for someone…Uh! It was a good long time

	me lo habían hecho. *Investigadora: ¿Entonces pasaba como más que un mes buscando…?* ¡No! Más tiempo, casi año talvez. Un buen tiempo, dilaté con esa tos y ahí estaba. Y sinceramente no sé por qué ya Dios. Dios me ayudó, me dio la tranquilidad y me ayudó, me hizo venir aquí. Porque vine ni sé ni como.„„ Pero yo antes… yo como tengo seguro, tengo, recibo una colilla, pero ahí no la dan en el camión de asociados, pues. Parece que ellos no pensaban en eso. Simplemente daban un frasquito para calmar la tos, nada más, pero sinceramente no era así porque ningún medicamento me caía bien. A veces me hacía mal…	with this cough and sweating and the cold that I had. I looked and they gave me medicine, but it didn't help. No one had done an [exam] on me… *Researcher: So you spent more than, say, a month looking?* …No! More than that…almost a year! A good amount of time, I lived with this cough and there I was. And sincerely, I don't know how without God. God helped me, he gave me calm and helped me, he made me come here [to the NTP]…because I didn't know how or where to go…but before, because I have insurance, I have…receive some coverage…but there they don't give this [medicine] out…it seems like they don't think about this [TB]. They simply give a little bottle of something to calm the cough, nothing more…but, sincerely, it wasn't good because I didn't like any of the medicines…sometimes they made me worse…
113	Casi no nos gusta comentar eso porque la gente siempre rechaza.	…we almost never like to talk about this because everyone always rejects you…
114	…después, cuando ya están diagnosticados. Violentación de derechos, porque vea, por ejemplo en el caso de las tres personas que tenemos en la zona franca, me parece a mí que ellos tienen que pagar de su salario. Ellos me refieren a mí que ellos no han recibido salario, siempre tienen cuatro meses de retrasos de salarios, entonces esa es una violentación a sus derechos. Y cuando ya tienen la enfermedad, ellos dicen: ya no queremos tenerlas aquí, mejor que se vayan porque pueden contagiar a una persona.	…after, when they are diagnosed…their rights are violated because, look…for example in the case of these three people that we have in the free-trade zones, it seems to me that they should be getting their salaries. But they've told me that they haven't received a salary…[worse still,] they are always four months behind on salaries…so this is a violation of their rights. And once they have the disease, they [the owners] say, 'Now we don't want to have them here…it's better that they go because they could infect someone else'…
114	…por lo general, están lo ultimo rincón del centro de salud…y como que…es algo clandestino…o que si fuera…algo ilegal y hípico!...pero la verdad de las cosas es de que estamos creyendo cambar esta maneje de estigmatización…porque cuando una persona tenia la tuberculosis era como que…le pusieron un grabado aquí en la frente…y todo el mundo se apartaba…nadie quería jugar…incluso…ya no querían en los noventas…ya los…los vecinos los identificaba…porque se querremos cambiar todo eso…y lo estamos haciendo a través de las capacitaciones.	…the TB clinics are generally in the very back of the health centre as though they were some kind of clandestine operation…something illegal...but the truth is that we're trying to change this attitude of stigmatization…because once a person has tuberculosis it was as though they had put a sign on their forehead and everyone would stay away from them…nobody wanted to be near them…and the neighbors would identify them…we want to change all of this and we're doing it through training…
114-115	…la discriminación que se da bastante. Incluso el mismo personal de salud… eh, tuve la oportunidad…de ver un paciente con VIH. Se sentó en las bancas de emergencia y él viene porque anda con un dolor gástrico tremendo. Y viene	…there is a lot of discrimination…even from health personnel…I [recently] had an opportunity to see a patient with HIV. He was sitting in the emergency waiting room…he had come because he was having

	la enfermera y estaba una sobrina de ella justamente en ese momento, cuando el muchacho se levanta de la silla; entonces ella le dice: ¡no te rentes ahí! a la sobrina, la enfermera. Entonces le digo: mirá, voy a hacer de cuenta y caso que no te escuché, porque había mucha gente y no le podía decir: me asusta que te comportes de esa manera, porque ella tiene que entender que el sida no se pasa porque uno se siente donde se sentó la persona con sida. Y duele, como te digo, golpea porque, puchica!, una enfermera, y que te venga con eso. Que porque el paciente se sentó ahí, su sobrina no puede sentarse. Me dio tristeza te digo	tremendous abdominal pain. And the nurse came along and one of her nieces was waiting there right then and when the young man stood up from his chair…then the nurse said to her, 'don't sit there!'…the nurse said to her niece. So I said to her, 'I hope I didn't hear you right'…because there are so many people who I've not said this to, '…it surprises me that you're behaving this way,'…because she needs to understand that AIDS doesn't get passed around because someone sits where a person with AIDS sat…and it hurts…like I told you, it's like a punch in the stomach, man! A nurse, and she treats you like this! Just because the patient sat there, her niece couldn't sit there! It makes me so sad, I tell you…
115	[no se van]…porque les da pena y algunos porque no creen que tienen eso, presentan los síntomas de tuberculosis, pero ellos no creen que pueda ser tuberculosis, no aceptan que tienen tuberculosis, entonces no vienen acá, entonces esperan la enfermedad hasta gravarse	…[they don't want to go] because they are ashamed and embarrassed and some because they don't believe they have it…they have the symptoms of TB, but they don't believe that it could be TB…they don't accept that they have TB…so they don't come here…they wait with the disease until they are gravely ill…
115-116	Primero, buscan servicios de los curanderos porque. ¿Porqué? Porque, mire, es que nosotros tenemos, el Ministerio de Salud tiene una mala imagen, muy pésima, peor ahora después de todas estos meses sin trabajar. Entonces, desgraciadamente tenemos una mala imagen. ¿Cuál es la mala imagen?: no te van a atender, vas a esperar todo el día, no te hacen caso, te dejan ahí, te mandan exámenes y no te los hacen, no tenemos riales con qué pagar, ¿me entiende? Es la espera también. Entonces ellos van y creen a la curandera, le creen. Primero la curandera, después a los médicos privados. Se automedican. Ellos mandan a comprarlos: óleo ferina, penicilina, un jarabe para la tos, cualquier cosa, que pueda decir tengo una infección, aquí tenés	…First, [they seek care from] the *curanderos* because…why? Because, look, it's that we have, the Ministry of Health has a bad reputation…really awful…worse now after all of these months without working. So, unfortunately, we have a bad reputation. What is the bad reputation? That you're not going to be attended to, that you're going to wait all day, that they're not going to listen to you, they leave you there…that they send you for exams and they won't do them for you…for which we don't have cash to pay. It is the waiting too. So they go and put their faith in the *curandera*…they believe in her. First, to the *curandera*, and then to the private doctors…they self medicate. They send them to buy [medicines]—aspirin, penicillin, a cough syrup…whatever then…you could go and say, 'I have an infection' and they'd say, 'Here you go!'…"
116	…cuando mi esposa tenía que levantarme de la cama, me reventaba ahí nomás, yo tiraba en la misma fuerza, ya sentía yo que los pulmones se me estaban reventando porque tiraba la pelota de sangre. Ella me ayudaba, ella me tenía que levantar rápido porque no me daba lugar. *Investigadora: ¿Y porqué no fue al centro de salud más temprano?* Es que como siempre llegábamos, usted sabe, de que hay una… El tratamiento	…when my wife had to lift me up from the bed, I gave up right then and there…I had nothing left in me, I felt like my lungs were exploding on me because I coughed up a ball of blood. She helped me…she had to lift me up quick because I couldn't do a thing… *Researcher: Why didn't you go to the health centre sooner?* …we always would go there, you know…we'd never heard of the treatment for this disease…that there was a treatment for this

	para esa enfermedad nunca lo habíamos escuchado nosotros, que había tratamiento para esa enfermedad y como nunca se había declarado, entonces yo sólo oía las cosas en la radio pero no decían en tal parte, eso nunca lo han dicho. Mi esposa fue que se dio cuenta de que una mujer así estaba y ella se estaba tomando el tratamiento y se había curado y estaba buena. De allí es que ella empezó a escucharme a mí, o sea que yo era…Y ella me decía mira que…hay que ir…y yo: ay! dejáme me voy a morir de todos modos, si se me quita bueno y si no pues. Me llevó y me anduvo diciendo aquí te mandan, pero yo qué estoy saliendo, yo no estoy saliendo más. Para qué traes eso. No, que tenés que echar ahí el bar, bueno, se lo llevó. Así fue que yo fui a dar a... pero yo no quería nada, nada. Lo que me van a dar es un puño de papeles y yo de donde riales voy a comprar. Pero como ya había peleado, ya había tomado medicina de médico, me fui y me dieron tratamiento de la malaria, nada, y me calló más peor, me dieron, comprar inyecciones, me escapó de matar. Ninguna cosa me llegó, a eso fue lo que me hizo el tratamiento.	disease…like it had never been declared an outbreak…I only heard the things on the radio, but they never said in what part of the country…they'd never talked about it. My wife was the one who realized that there was a woman here who was taking the treatment and had been cured and got better. It was from then on that [my wife] started to listen to me, or well…[thinking] that I was having the same thing…[my wife] brought me [to the clinic] and was saying to me, 'they will tell you what to do'…but what was I going there for? I was already dying. 'So that you bring this,' [the nurse says to me,] 'no, you need to do a sputum exam,'…so, I took it to her. This is what made me go and give the sputum. But I didn't want any of it…none of it! [I thought,] 'All they are going to give is a handful of papers and then tell me where to spend my money...' And I'd struggled [with this cough], I'd taken the medicine from the doctor…I'd taken malaria treatment…nothing…I kept getting sicker…they told me, buy more injections…but somehow I escaped death. Not one thing worked for me…this is how I ended up with the treatment [for TB]…
117	y ayudó muchísimo también la campaña en la… televisiva, después de dos meses esto impactó muchísimo y ayudó a la población. Lástima que no siguió pues más…	…the campaign on television helped so much…after two months this had a big impact and helped the population. It's a tragedy that it didn't go on for longer…
117-118	…la mayoría de la gente no, sólo los que tienen algún familiar, entonces sí conocen. La vez pasada estuvieron pasando un mensaje por la televisión, entonces estuvieron viniendo bastante. Pero cuando ya dejaron de pasar eso… *Ivestigadora*: ¿Cuándo ya dejaron ese anuncio por televisión, qué pasó? Cuando pasaron ese anuncio en la televisión. Bastante estuvieron vivniendo. bastantes chavalos y jóvenes estuvieron viniedo…Ya no, como que aquellos se olvidaron. Pero si fíjese que vinieron hasta pacientes gordos, que sólo porque tenían tos venían a hacerse los exámenes…Si, si, estaban pensando. Venían muchachos bien gordos a hacerse los exámenes porque tenían tos. Dio bastante resultado ese anuncio que pasaron. Hace como unos cinco meses atrás.	…the majority of the population don't [know about TB]…just those that have some family member, then they know. The other time they were putting an announcement on television, so then they were coming a lot. But when they stopped putting it on… *Researcher: When they stopped this announcement on television, what happened?* …when they stopped putting the announcement on television, lots of people were coming. Lots of guys and young people…were coming…but now, no…it's as though they've forgotten. But there were even lots of fat patients coming, that only had a cough and came to have a [sputum] exam done…yes, they were thinking [of TB]. Some really fat guys even came to have their [sputum] tested because they had a cough. There was a lot of good result from this announcement that was on. It was some five months ago…
118	…hay un parte bonita que tengo de eso. Yo con los clubes me aproveché bastante, porque yo soy bien aprovechada, porque a ellos también les dije: toda persona que ustedes vean con tos y que tenga esos mismos malestares que usted tenía, por favor tráigamelos o me los manda o me hace un papelito o sólo	…there is something beautiful that I have in this. I take a lot of advantage of the TB clubs because I'm an opportunist! Because I also said to them, 'every person that you see with a cough and that have these same malaises that you had, please bring them to me, or send

	le dice búsqueme, eso es todo. Entonces, con ellos tengo una red grande…Porque, fíjese que es más efectiva que esa red?	them to me, or make me a little piece of paper or just tell them to come look for me…that's it. So with them, I have a big network…because, what is more effective than this network?
118-119	La promoción que se está haciendo sobre el fondo global, todo el tema de la comunicación, la sensibilizacióny todo eso…todo depende del nivel local, cómo lo van a promover y qué relación tiene con las comunidades. Porque siempre es lo mismo, si tú tienes autoridad moral y técnica y la gente te acepta como médico, como enfermera, y te aprecian, te aceptan, entonces cuando tú ves a los pacientes en la sala de espera (y tú dices), todos los que tengan tos por más de 15 días, por favor, así y así eso puede ser tuberculosis, entonces la gente te va a escuchar y te van a aceptar, pero si tú tienes mala fama no va ayudar mucho tu promoción tampoco no? Entonces todo va junto no? Pero yo creo que sí, la inversión, porque se está haciendo fuerte inversión en promoción es muy importante pero tiene que ser una promoción sostenida, si tú solamente hablas un día sobre esto, un mes después la gente lo olvida, tiene que ser algo sostenido, entonces ahí hablamos de sostenibilidad de un proyecto tan grande. Si después de cinco años se cae a un nivel mínimo puede ser que se pierde mucho esfuerzo, pero si el personal local sigue sensibilizando a la población, está bien, mucho depende de los compromisos no?, de la parte local	…the promotion that they are doing on the Global Fund, all this theme of communication, of raising awareness and all of this…depends on the local level, how they are going to promote and what kind of relationship they have with the communities. Because it's always the same, if you have moral and technical authority and the people accept you as a doctor, as a nurse, and they appreciate you, accept you, then when you see patients in the waiting room and you say, 'everyone who has a cough for more than 15 days, please, this and that, it could be tuberculosis…then the people are going to listen to you and are going to accept you…but if you have a bad reputation, your promotion isn't going to help much, right? So, everything goes together, right? But I believe that yes, the investment, because they are making a strong investment in promotion, is very important but it has to be a sustainable promotion…if you only talk about this for one day, one month later the people forget about it…it has to be something sustainable. So, there we're talking about the sustainability of a large project. If, after five years, it falls to a minimal level it could be that it loses much of its strength, but the local personnel continue to create awareness among the population, that's good, much depends on this commitment, right—at a local level…
119	El más grande ha sido el impulso del DOTS comunitario. Nosotros no habíamos tenido la oportunidad de tener ni financiamiento, ni la implantación de la estrategia. Es nuevo, no tenemos experiencia en DOTS comunitario. Entonces estamos impulsándolo. Para esto hemos enviado gente afuera, gente de los SILAIS a hacer pasantías a países como Bolivia que tienen experiencia en DOTS comunitarios para que nos apoyen, nos aporten los conocimientos adquiridos.	…The biggest [thing] has been the drive for Community DOTS. We didn't have the opportunity to have either financing or implementation of this strategy. It's new…we don't have experience with Community DOTS. So this we're starting up. For this, we've sent people out, people from the SILAIS, to do internships in countries that have experience in community DOTS, like Bolivia, so that they help us, support us get the knowledge we need…
119	Entonces…lo que sea…esta trabajando es…dando la capacidad con lideres comunitarios para que ellos apliquen el DOTS en las comunidades donde el ministerio de salud no tiene presencia o su presencia es limitada por la inaccesibilidad. Entonces…de manera de que si yo estoy una paciente o una persona con la tuberculosis y vivo en el pueblo…para tener acceso al medicamento…yo capacito a usted…o un personal de salud la capacita a usted…para que usted lleve el medicamento hasta donde vive usted. Y, no	…So, then, this work is giving training to the community leaders so that they apply DOTS in the communities where the ministry of health doesn't have a presence or their presence is limited because of the inaccessibility. So, in the sense that yes, I'm a patient or a person with TB and I live in the village…to have access to medicine…I train you…or a health professional trains you….so that you bring the medicine to where you live. And, not just give the medicine, but know

	solamente administrar el tratamiento, sino conozca los afectos adversos de medicamento…y, sepa también identificar los sintomáticos respiratorios en la comunidad…y…referirlos al servicio mas cercano…desde a los puestos de salud, o desde a los centros de salud…	the adverse effects of medication…and to also know how to identify respiratory symptomatics in the community…and refer them to the nearest service….to the health posts or health centres…
121	la mayoría de las veces pasan fuera, van a los curanderos, van a las clínicas privadas. Porque ahí sólo compran el medicamento y se van	…the majority of the time, they [PATB] spend time outside [the public sector]…they go to the *curanderos*, they go to the private clinics. Because there, they just buy the medicines and go…
121	Bueno…las personas llegan al programa de los dos maneras…porque llegan a consultar porque ya anda con tos…o porque un medico privado los refirió a un centro de salud…no solamente los médicos privados, sino los entrega médicas provisionales…sea los personas atendía por el…por el…seguro social…entonces vienen referidas de muchas lados	…well, the people come to the program from two ways…because they come [to the public clinic] for a consult because they have a cough…or, they were referred by a private doctor…it's not just the private doctors, but through provisional doctors…or the people who provide service for the social security…so they [PATB] are referred [to the program] from many ways…
121-122	Particpante 1:…por ejemplo aquí hay un señor que dice que no sabía qué es tuberculosis y él fue hasta donde el brujo, se podía curar con mágica, entonces él fue adonde el brujo para ver si podía. Participante 2: A mí me iban a llevar donde el brujo. *Investigadora: Si vas donde un brujo, ¿qué hace?* Participante 2: Lo estudian a uno para ver, le estudian las cartas *Ivestigadora: ¿Y después?* Participante 2: Pueden dar una hierba, medicamentos. Si ellos son inteligentes pueden engañar y sacar dinero para curar pero, yo no creo en brujo. Eso que la gente ignora muchas veces la enfermedad, entonces ya fueron a toditos los hospitales, entonces van a buscar un brujo. Participante 1: Es porque ellos miran que no se curan de nada Participante 2: A mí me recetaban de todo. A mi me recetaban…no sé qué cosa, un montón de medicamentos	Participant 1: …For example, here there is one gentleman who said he didn't know what is tuberculosis and he went to see the witch, he might be able to cure him with magic, so he went to the witch to see if he could do it.... Participant 2: They were going to take me to a witch… *Researcher: If you had gone to a witch, what do they do?* Participant 2: They study you to see…they study their cards… *Researcher: And then?* Participant 2: They can give an herb, medicines. If they are intelligent, they can make some money, get some money out of the cure…but, I don't believe in the witch. It's that the people often ignore the disease, so they've all gone to the hospitals already, so they're going to look for a witch. Participant 1: It's because they feel like they [the hospitals] don't cure you of anything… Participant 2: They [the hospitals] gave me prescriptions for everything…they gave me prescriptions of…I don't know what…a ton of medicines…
122	Es que lo que pasa primeramente es que uno no puede decir… uno no adivina pues, tengo esto voy a ir directamente. Y por lo menos, primeramente cuando uno tiene sus posibilidades uno busca su mejoría. Que por lo menos, yo vengo aquí al centro, me examinan y lo que me dan es una acetaminofen. Y en los privados, quizás a uno le recetan pero, quizás uno a veces dice me voy a lo mejor, porque me recetan y nunca voy mejor, pero en los privados lo mandan a	…it's that, what happens at first is that one can't say…one can't guess, right, 'I've got this, I'm going to go directly [to the NTP]'. And, at least at first, when you have [financial] possibilities, you want the best. At best, if I come here to the centre, they'll examine me and all they're going to give me is an acetaminophen. And in the private centres, maybe they'll give you a prescription. But perhaps sometimes they say,

	hacer exámenes, lo mandan a hacer esto y el otro y entonces a veces sale mejor porque ya ve por lo menos, un ejemplo: una persona viene con calentura y todo eso, aquí, digo yo que los otros doctores le pueden hacer, como decir así, examinando y cosas y ya le dicen a uno: tómese una acetaminofén. Eso casi no cae bien, por lo general no cae bien. Entonces mejor irse al privado. Por lo menos en los casos de nosotros nos hemos ido al privado, pero en el privado no le dan tratamiento, a uno los tratamientos sólo están aquí	'I'm going to go to the best', because [at the public centre] they give me a prescription and I'm never going to get better, but in the private [clinics] they're going to send me for exams, they'll get me to do this one and the other and so sometimes it turns out better because there you see at least…an example: a person comes with fever and all of that, here, I say, 'What can the doctors do for you?' it's like this—examined and things and already they say to you: take this acetaminophen. This almost never goes over well, in general it doesn't go over well. And so, it's better to just go to the private [clinic]. At least in our case, we went to the private [clinic], but they don't give treatment there…the ones who give treatment are only here…
122-123	Entonces, hay un despertamiento…pero…este…anteriormente era muy poco los médicos privados que...que…transferían a los pacientes sintomáticos respiratorios…a la atención…Están empezando…no es…una participación fuerte [del sector privado]. Pero, si están empezando a…trabajar con personas que anteriormente que no…este…trabajaba con el programa de tuberculosis…Entonces…este…están capacitando los estudiantes en las universidades…están capacitando al gobierno…a los SILAIS…regionales…están en unos municipios…haciendo presentaciones….este…de la situación de la tuberculosis en cada uno de los municipios…	…So, there is an awakening…but…before, it was very few private doctors that transferred patients with respiratory symptoms to the care [of the NTP]…they are starting now…it's not a strong participation…but yes, they are starting to work with people who before…didn't work with the tuberculosis program…So, they are training the students in the universities…they are training the government…the regional SILAIS…they're in some municipalities…giving presentations about the TB situation in each of the municipalities…
123	Nosotros tenemos una ventaja como país y es que sólo el ministerio maneja los esquemas de tratamiento. No se vende en ninguna farmacia…y por eso no tenemos mucha injerencia del sector privado con los pacientes. Entonces esa es la gran ventaja que tenemos. Pero al mismo tiempo hemos logrado que un sector de la sociedad nicaragüense que está en el sector privado, que es el Seguro Social vaya poquito a poco fortaleciéndose poquito a poco en la comercialización y el Seguro Social y el Ministerio de Salud. ¿Por qué?, porque el seguro social es parte de la CONAPAT y ellos no brindan tratamiento. Entonces, todo paciente, aunque ellos lo manejen como asegurado, tiene que ir al ministerio a recibir el tratamiento. Entonces no hay un choque con el sector privado	…We have an advantage as a country and it's that it is only the ministry who manages the treatment schemes…they don't sell them in any pharmacy….and because of this, we don't have much mismanagement of patients in the private sector. So this is the great advantage that we have. But, at the same time, we've been able to engage a sector of Nicaraguan society that is in the private sector, which is the Social Security [program], that bit by bit is strengthening little by little in the collaboration between Social Security and the Ministry of Health. Why? Because, the Social Security [program] is part of the CONAPAT and they don't offer treatment. So, every patient, although they're managed like an insured individual, must go to the ministry to receive treatment. So, there isn't any clash with the private sector…
123	Hablando honestamente no es tan bueno como quisiéramos. Lo que pasa es que ellos se ven obligados, al no tener acceso al tratamiento, a tenerlos que derivar al Ministerio de Salud, entonces, no es que exista una coordinación tan	…Speaking honestly, it's not as good as we'd like. What happens is that they [private practitioners] think they're being forced…to not have access to treatment, to have to refer to the Ministry of Health, so…it's

	fuerte, pero ellos se ven obligados, más que todo por eso. Porque a lo mejor, si ellos tuvieran el tratamiento talvez no lo harían, pero como no lo tienen, no hay en las farmacias, entonces no queda más que remitirlo al Ministerio de Salud	not that there exists a very strong coordination, but they think they consider themselves obligated [to refer]…more than anything for this. Because, at best, they would have the treatment and perhaps they wouldn't do anything, but seeing as how they don't have it and it isn't in the pharmacies, then there is no option other than to send it to the Ministry of health…
123-124	Ahí no ha avanzado nada, por lo menos aqui, seguimos igual, el seguro por un lado, las clínicas previsonales por otro, y el Minsa por otro lado. Por lo menos a mí nadie ha venido a buscarme para que coordinemos…me imagino que habrá comunicación entre el comité [la CONAPAT] que hay con el nivel central con todos ellos, pero ya que van a ir a los SILAIS, por lo menos… no.	…there, nothing has changed…at least in [this region] it's the same…the [social] security on one side, the provisional clinics on another, and the Ministry of Health on the other. At least no one has come to me to see if we could coordinate…I imagine that there will be some communication within the committee [CONAPAT] that there is on a central level with all of them, but they're [the CONAPAT] not going to go to all of the SILAIS…no…
124	en las universidades hay una clase que se llama Salud y Sociedad, hay otra que se llama Higiene y Epidemiología donde les hablan del programa, durante la etapa de formación. Y luego, cuando los muchachos salen, que van al servicio social…que salen del internado, todos los programas del ministerio les van a dar charlas a ellos sobre los programas. Pasan una semana en capacitación antes de que vayan a los sitios en donde son distribuidos. Y ya dentro de los SILAIS, en cada uno de los departamentos, ellos participan en cada una de las capacitaciones	…In the universities, there is a class called 'Society and Health' and another called 'Hygiene and Epidemiology' where they talk to them about the program…during the [theoretical]/formational period. And later, when the guys finish and go to their social service…go out as an intern, all of the Ministry programs are going to give them presentations about the programs. They spend one week in training and then they go to the sites they're assigned. And in each SILAIS, in every one of the departments, they participate in these trainings…
124	por ejemplo, con eso de los talleres que nosotros realizamos, ya por lo menos yo levo dos talleres; en el aspecto de la intersectorial ellos nos apoyan, por ejemplo el MED; nosotros ya capacitamos al MED y hay sectores que ellos miran que los niños, un joven anda con tos , ellos lo remiten a las unidades de salud. El conocimiento hace que ellos lo capten.	…for example, with these workshops that we put on, already I have done at least two workshops…with the inter-sectoral aspect, they help us…for example, the MED—we've already trained the MED and there are sectors where they're seeing children…a young person is with a cough, they send them to the [public] health centres. The knowledge makes it so they capture [respiratory symptomatics]…
124-125	Bueno, en primer lugar las capacitaciones, es un factor importante, sería personal de salud. Me gustaría involucrar aquí lo que son las clínicas provisionales, las clínicas privadas. Me parece que tenemos un poquito de problemas en las clínicas privadas…[que] nos sentemos a hacer un programa, a hacer como un proyectito pequeño con las clínicas provisionales. ¿Porqué estoy hablando de esto? Porque, es cierto que el fondo global nos ayuda, nos apoya, pero nosotros aquí tenemos ingresados pacientes que son de clínicas provisionales, clínicas privadas y que son pacientes que han sido mal diagnosticados en las clínicas. Por ejemplo tenemos una [mujer] que la detectaron por un cáncer laríngeo y cuando aquí vino y le hicimos los bares era	…well, in the first place with training of health personal, [the lack of awareness] is an important factor. Here, I would like to involve the provisional clinics, the private clinics…It seems to me that we have a little bit of a problem in the private clinics…we should sit and make a program…to make a small project with the provisional clinics. Why am I talking about this? Because, it's true that the Global Fund helps us, supports us…but, here we need to be registering patients that are from the provisional clinics, private clinics and these patients have been misdiagnosed in the clinics. For example, we have one [woman] that they diagnosed with a laryngeal cancer and when she came here,

	una tuberculosis pulmonar y le habían dicho que era un cáncer laríngeo, entonces, me parece a mí que hace falta más capacitación a las clínicas provisionales.	we did the sputum exams and it was a pulmonary tuberculosis and they had told her that it was a laryngeal cancer! So, it seems to me that the training of the provisional clinics is lacking…
125	el médico privado, nunca piensa en primera patología en tuberculosis; y a pesar que los médicos privados son los mismos médicos, algunos que son del hospital. Usted sabe que del parte económica, si usted detecta en la primera consulta, usted ya no va a llegar a una segunda consulta… Pero como eso es algo voluntario, y de conciencia, de sensibilización que el médico tenga de decir este caso desde que yo lo miro yo digo es una tuberculosis. Lo que le está haciendo gastar y gastar hasta que se cansó, él dijo que era tuberculosis o el mismo paciente ya no tuvo y tuvo que ir a la unidad de salud y ahí se detecta	…the private doctor never thinks of TB as a primary pathology; and, despite the fact that the private doctors are the same doctors, some that are from the [public] hospital. You know that from the economic side of things, if you detect [TB] in the first consult, then you're not going to come for a second consult…but, because it is something voluntary, of conscientiousness, of awareness…that the doctor has to say, 'this case, from how I see it, is a tuberculosis'. What they are doing is billing and billing until there's nothing left, then he said that it was tuberculosis or that now the same patient didn't have [what they thought it was] and had to go to the health centre and there they detect [TB]…
126	Participante 1: Por ejemplo, tengo uno que ingresó hace poco y tenía 6 meses y anduvo de médico en médico, hasta que un doctor de aquí, que trabaja en el privado y él lo captó. Le mandó y el fue lo primero que le mandó y salió positivo… Participante 2: Pero fíjese que así a mí me pasó con 2 pacientes, uno tenía 3 meses, y se dio cuenta que tenía la enfermedad y el otro tenía 6 meses también…. Pasaron 6 meses para que ya se diera cuenta qué era lo que tenía. Participante 1: No sé por qué los médicos no sospechan [la TB] en ese momento, Participante 2: Más en los privados….. Participante 1: En mandarle, no tiene nada de trabajo y hacen gastar a la persona, o tal vez porque ellos quieren que la persona esté regresando a cada momento a gastar su dinero, no sé.	Participant 1: For example, I have one who started [with the program] just a short time ago and spent six months going from doctor to doctor, until one doctor from here, that works in the private [sector], and he captured it. He sent her here and he was the first to send her and it [the sputum exam] came out positive… Participant 2: But, ya, this happened to me with two patients, one spent three months and then realized that he had the disease and the other has six months too…they spent six months before they realized what it was that they had… Participant 1: I don't know why the doctors don't suspect [TB] in the moment... Participant 2: More in the private [clinics]… Participant 1: In referring them [TB suspects]…they don't have any work and so they try to get as much as they can out of the person, of maybe because they want the person to be coming back every time to get more of their money…I don't know…
126	Un paciente que ingresó en estos días estuvo dos meses antes que me lo trasladaran para acá…lo que pasa es que el sector privado, vienen hasta cuando ellos quieren. Fíjese que a éste el examen se lo hicieron el 15 de diciembre. Si, estos son bares…todos estos son bares mire, que le hicieron. Por aquí está la radiografía. Aquí está la radiografía, con la radiografía le voy a decir. 19 de diciembre, mire y el paciente ingresó el 29 de marzo. Este venia de Médicos Unidos. Hasta el 24 de marzo me lo mandó y desde diciembre lo tenían. Desde	…one patient that started [with the program] in these last couple of days spent two months [in the private sector] before they transferred him here…what happens is that in the private sector, they don't come [here] until they [the private practitioners] want them to. Look, in this case, they did the [sputum] exam on the 15th of December! Yes…these are sputum exams…all of these sputum exams, look…they did them. And here is the X-ray. Here is the X-ray…with the X-ray I'm going to

	diciembre sabían más o menos que era un paciente tuberculoso. Haciéndole estudios decían ellos, estudios y estudios, hasta diciembre no me lo mandaron.	tell you…19th of December and the patient came here to register on the 24th of March. He came from [a private clinic]. They'd had the results since December and it wasn't until the 24th of March that they sent him to me. Since December, they've known more or less that he was a TB patient…doing whatever exams they say, exams and exams…since December didn't they send him to me!
127	Nosotros…el personal de salud…de Nicaragua, somos unos de los peores pagados a nivel de Centro América…entonces, por eso es que nosotros muchas veces es común…salimos del sistema para trabajar en un ONG….o clínica…porque pagan un poco mejor…incluyendo…pero es un montón de trabajo. Pues, no me importa que es un montón de trabajo. La verdad de las cosas es de que…para que una esté… satisfecho con como que andan. O, pues, por lo menos le sirve para el agua de los frijoles	We…the health personnel…of Nicaragua are some of the poorest paid in Central America…so, for this many times it's common to leave the system to work for an NGO…or clinic…because they pay better…but it is a ton of work. Well, it doesn't matter to me that it's a ton of work. The truth of the thing is that this satisfies what you need…or, well, at least so that you have enough to get you the water and beans!
128	…realmente se ha visto fortalecida con esto del proyecto es la misma coordinación que hemos venido logrando entre los programas de VIH/SIDA y tuberculosis. Hemos aprendido a capacitar conjuntamente sobre las dos enfermedades. No está todo realizado, pero sin embargo ya hablamos de las normas del VIH y normas de tuberculosis que tratan ambos temas…el manejo de este tipo de pacientes, si creo que ese ha sido otro elemento importante en que hemos logrado avanzar como proyecto	Really, we've seen a strengthening in this coordination that we've achieved between the HIV/AIDS and tuberculosis. We've learned how to train about these two diseases together. It's not completely come together yet, but still we talk about the HIV norms and the tuberculosis norms that touch on both themes. The management of this type of patients, yes…I believe that this has been another important element in which we've managed to advance as a project…
129-130	Cuando hay un programa que tienen un financiamiento muy fuerte existe, claro, la amenaza que éste desequilibra a nivel local la relación entre los programas, porque si hay mucha exigencia de un solo programa de ejecutar actividades esto puede dar menos tiempo a… menos recursos humanos a otros programas, en ese sentido puede ser una amenaza. Pero puede ser que no porque si a nivel local, tú como gerente o como director sos capaz de asimilar bien en el que hacer diario, no afectaría no?. Pero que los otros programas realmente se benefician del Fondo Global, sí, puede ser; el Fondo Global le financia [la salida para supervision], y como la enfermera… y como también las distancias ahí son muy difícil, largo y…… y por eso muy costoso, porque la enfermera que es la misma responsable de los dos programas, supervisa los dos programas con el mismo fondo; entonces sí se aprovecha. Yo creo que un buen gerente, un buen director puede aprovechar esos fondos para…Pueden aprovechar otras actividades	When there is a program with strong financing there exists, of course, the threat of this disequilibrium at a local level in the relationship between programs, because if there is a lot of pressure for just one program to execute its activities this can [result in] less time…less human resources given to other programs, in this sense it can be a threat. But, it might not be because at a local level, if as a manager or director you are can assimilate well in what you do daily, it won't have an affect. But, if other programs really benefit from the Global Fund, yes…it may be because…the Global Fund provides financing [for supervisions] and as a nurse, and seeing as how I the distances are long and difficult…and because of this, quite costly…because the nurse is the one responsible for the two programs, she supervises the two programs with the same fund, so, she takes advantage [of the opportunity]. I think that a good manager, a good director can take advantage of these funds…can take advantage [of them] for other activities…
129-130	…hay unos que tiene su trabajo y vive más o menos pero hay otros pacientes,	…there are some that have their job and live so-so but there are other

	por ejemplo los cargadores del mercado, esos viven en condiciones pésimas. Hay unos que las paredes de las casas son de zinc viejo, por hoyos o tablas viejas. Ese muchacho que andaba bolo viera horrible donde vive. Son bien pobres. Y las condiciones en que viven usted viera, en una casuchitas, pero cuartitos las casitas, todas pegaditas y son con techos de tablas, de zinc. Y ese muchachito que se acaba ir, que le dije que andaba bebiendo guaro, viera usted qué horrible. Hay un pedazo de la casa que no tiene techo, hay otro pedazo de la casa que tiene un zinc todo por hoyo y cuando llueva eso se va a remojar y adentro de la casa es horrible, vive con dos ancianitos, viejitas, viejitas. Y por eso no se quería ir, porque dice que no quería dejar a las dos ancianas y el solo vive borracho vive, hasta acostada en el suelo. Un día lo golpeó un carro, otro día lo mordieron los perros. Y es estudiado el muchacho	patients, for example the street venders, they live in terrible conditions. There are some houses that have walls of old zinc, made from old signs and tables. This guy who [was here] with the bandana, you'd see how horrible it is where he lives. They are really poor. And the conditions that they live in, you'd see, in a little house but the house is really a tiny room…everyone crammed in and the roofs are made of tables and zinc. And this guy that just left, that I told you had been drinking, you'd see how horrible. There is one part of the house that doesn't have a roof, another part of the house is made completely of metal signs and when it rains, this is going to get wet and inside the house is horrible…he lives with two seniors, little old people. And because of this, he didn't want to go [to the hospital for treatment] because he said that he didn't want to leave the two seniors and he just lives drunk…until he's face down on the ground. One day, he was hit by a car, the other day dogs bit him. And this guy is educated…
130	…están los factores de la pobreza…de…situaciones socioeconómicas inadecuadas…y…problemas socioeconómicos…la pobreza…la falta de una adecuada alimentación…y entonces…acceso a los servicios…es limitado el acceso de los servicios…y bueno…también…están los factores propiamente territoriales! Ya…este…son…incluso…hasta un día…dos días de camina…para llegar a un puesto de salud…entonces…este…la mayoría de las personas que se enferman por la tuberculosis…este…y dentro los factores, a parte de eso….esta la droga adicción y el alcoholismo…entonces…todas estas cosas juntas hacen un paciente de TB. Estos son los ingredientes para fabricar a una persona con tuberculosis…	…there are the factors of poverty…of inadequate socioeconomic situations…and socioeconomic problems…poverty…the lack of adequate nutrition…and so…access to services, it's limited the access to services…well, there are the factors specifically geographical! Yah, they're…one day, two days walk to go to a health post…so, the majority of people who become sick with tuberculosis…and within these factors, one part of this, is drug addiction and alcoholism…so, all of these together make a TB patient. These are the ingredients to fabricate a person with tuberculosis…
130	Yo me aflijo porque sabe cuántos nicaragüenses se van a Costa Rica. Pobrecitos ellos van y viven mejor. En nuestro país no podemos vivir tranquilos. Trabajar, ganar un salario digno, nada de eso. Bajísimos. Fíjese que con el costo de la vida, la gente del campo ganan ahorita C$ 22.00 por día…realmente no es acorde para nada, pero no sé con cuánto está subsistiendo la pobre gente.	It troubles me because, you know how many Nicaraguans go to Costa Rica. The poor things…they go and live better. In our country we can't live in peace. To work, to make a dignified salary…there is none of this…[the salaries] are incredibly low. Did you know that with the cost of living, the people from the farm make C$22.00 per day right now…per day…really, it doesn't amount to anything…but I don't know with how much the poor people are sustaining…
130-131	el tema de la vivienda en Nicaragua es una prioridad muy grande. Hay un calculo que se dice aproximadamente faltan mas que seis ciento mil viviendas en el país. Es bastante grande. Y el problema es que no hay proyectos o fondos por lo menos hasta el momento, quizás mas adelante, para poder producir la cantidad de viviendas que se necesita. Entonces, realmente en el	…the theme of housing is a very big priority in Nicaragua. There is an estimation that says that there is a lack of approximately six hundred thousand houses. It is quite large. And the problem is that there are no projects or funds, at least for the moment, perhaps more in the future, to be able to produce the quantity of houses that are needed. So, really, in

	caso de tuberculosis, yo se que cada una de estas factores están involucrados… y sigue el Fondo Global podría, digamos, contribuir a unos de estos aspectos	the case of tuberculosis, I know that every one of these factors is involved…and it follows that the Global Fund could, let's say, contribute to some of these aspects…
131	Pero la mayoría de las personas que he tenido la oportunidad de tratar aquí son personas totalmente desprotegidas que unas ni siquiera casa tienen y eso es algo que a ustedes les duele mucho que no hay mucho…y usted dice: ¡ah!. Yo me doy mi tiempo y digo: ¿cómo es posible que esta gente pueda sobrevivir?, he llegado a lugares en donde hay sólo una especie de toldos que uno hace de plásticos y no hay más que una sola cama para toda la familia. El paciente está acostado en la cama y el resto de la familia, yo me pongo a pensar ¿en donde duermen? Son cosas que se ven acá.	But the majority of the people that I've had the opportunity to treat here are people who are completely unprotected…some don't even have a house and this is something that causes you [foreigners] a lot of pain…and you say, 'Ah! I give my time!' and I say 'how is it possible that these people can survive?' I've gone to places where there is only a kind of awning that one makes out of plastics and there isn't anything but a single bed for the whole family. The patient is laying on the bed and the rest of the family, I start thinking to myself, 'where do they sleep?' These are things that you see here.
131	…yo siempre he pensado, yo soy de familia que también vengo de estrato social bien pobre. Nosotros, cuando yo era pequeña cortábamos café con mi familia y todo eso, por eso yo tengo mucho cariño por la gente. Yo no tengo servilismo por gente que tiene plata. No, ellos pueden ir donde ellos quieran, si quieren hacerse una operación en los estados, se van tranquilos, donde ellos quieran y ya se mueren porque realmente no pudieron vencer la muerte, pero los nicaragüenses pobrecitos se mueren por hambre, se mueren por falta de un montón de cosas, a veces falta de cariño, de comprensión	…I've always thought, 'I'm from a family that also comes from a very poor social strata. When I was little, we cut coffee with my family…and because of this, I have a lot of affection for the people. I'm not obsequious to people who have money. No…they can go where they want, if they want to go to the [United] States to have their operation, they can go…go where they want and then they die because really, they couldn't defeat death…but the poor Nicaraguans die of hunger, they die because of a lack of a ton of things…sometimes the lack of caring, of understanding…
132	… aunque se respeta lo del proyecto dirigido a las tres enfermedades, muchas de estas cosas [los factores del derecho en salud] que se consideran, no está contemplado ni dentro de los objetivos del proyecto, ni dentro de las estrategias**…**Lo único que estamos haciendo es fortalecer las capacidades diagnosticas en esos locales, y las capacidades técnicas del personal que esté ahí. Entonces, lógicamente, el acceso a las personas es más fácil porque no necesita ir hasta una unidad más lejana cuando tiene una ahí más cercana. Pero no es que estamos mejorando en sí todas sus condicionantes para desarrollar o no la enfermedad	…although [the Global Fund] respects the project directed at these three diseases, many of these things [factors in health rights] that they consider are neither contemplated in the project objectives nor in the strategies…the only thing that we are doing is to strengthen the diagnostic capacities [at the] local level and the technical capacities of the personnel that are there. So, logically, people's access is easier because they don't have to go to the [health] unit further away when they have one there, closer. But it's not that we're improving in all of the conditions that [contribute] to develop the disease or not…
132	tal vez en los paquetes alimenticios pueden aportar, no? Aquí, pero claro, es temporal, porque….. el tema del hambre, el tema de la alimentación, es un tema estructural, no?, un tema de injusticia y de muchos otros factores, no? Que influyen; el Fondo Global no puede… no trabaja en ese tema, entonces, los paquetes alimentarios son para mí es un arma de doble filo, porque por un lado te ayuda a mantener tu paciente ayudarle económicamente con alimentación, a recuperar más fácilmente etc. Y temporalmente recibe esa	…perhaps in the food packages, they could help, right? Here, but of course, it is temporary because…the theme of hunger, the theme of nutrition is a structural theme. A theme of injustice and many other factors, no? That they influence it? The Global Fund can't…it doesn't work in this theme, so the food packages for me are a double-edged sword because, on one hand it helps you to maintain your patient and help them economically with food…to recover more easily etcetera. And

	ayuda; por otro lado si mañana el Fondo Global termina, el gobierno va a… será que seguirá dando paquetes de alimentación a los pacientes? Tal vez ya no le dan, entonces se quita un estímulo, un incentivo que se ha dado por varios años en algunos lugares y eso también puede tener un efecto negativo, no? Porque hay que trabajar en el problema estructural, el de la pobreza no?	temporarily, they receive this assistance. On the other hand, if tomorrow the Global Fund comes to an end, the government is going to...would have to continue giving food packages to the patients. Maybe then, they don't give them…so then you stop a stimulus, an incentive that they've given for several years in some places and this could have a negative effect, no? Because you have to work in the structural problem…that of poverty, no?
132-133	…trabajar en el tema de derechos en salud, hay que en primer lugar, trabajar en el tema organizacional comunitario, porque la gente organizada logran más rápido sus derechos que la gente no organizada, nosotros en un centro de salud estamos trabajando en un tema de éstos no? Es importante que… por eso yo digo que importante que se podría pensar en trabajar en el tema de la asociación de pacientes no? enfermos con tuberculosis donde pueden estar integrados expacientes y…que tenes un espacio organizativo donde pueden acudir gente ex tuberculosis y gente tuberculosis, y donde pueden tocar diferentes temas y ver cómo pueden presionar más a las autoridades locales, sea de salud, sea de educación, sea de vivienda, para exigir más sus necesidades no?... pero todo comienza con organizar la gente, pero si tú no organizas la gente no vas a lograr nada.	…to work in the theme of health rights, you first need to work in the theme of community organization, because people who are organized will make faster progress with their rights than people who are not organized…we in one health centre, we're working in one of these themes, right? It's important that…for this I say that it is important that they could think of working in the them of the patient associations [TB Clubs]…People who are sick with tuberculosis where they can integrate with ex-patients and…that have an organizational space where people who had TB and people with TB can come together and can touch on different themes and see how they can put more pressure on the local authorities, whether it be in health or in education, or in housing…to demand more for their needs…but everything starts with organizing the people, but if you don't organize the people, you don't achieve anything…
133-134	Eso, hablando al derecho al salud…aquí en Nicaragua el tema del derecho al salud es bastante complicado. Porque, a ver, si lo vemos desde el punto de visto muy formal…es decir, desde el punto de las leyes, verdad, si—allí están las leyes. Es decir…eso es un problema—hacer que las leyes sean efectivas. Por ejemplo, la constitución política dice que todos los cuídanos tienen el mismo derecho a los cuidados de salud y que el estado ejecutar como organizarlo. Eso dice la constitución. Sin embargo, en la practica, ya hablábamos del sistema. El sistema es un sistema segmentado…dependiendo de ciertos recursos, no tienes recursos, tenes un determinando sistema de salud. Entonces allí se estrella la idea del derecho. Hay sectores, verdad, que hay un entendido de que hay un derecho como un…una obligación del estado a darse los servicios gratis. Yo creo en nuestro país eso es un sueño…	…speaking to the right to health…here in Nicaragua, the theme of the right to health is quite complicated. Because…if we look at it from a very formal point of view, that is, from a legislative point of view, right, yes—there are laws. It's to say, this is a problem—to make the laws effective. For example, the political constitution says that all of the citizens have he same right to health care and that the state is responsible to organize this. The [health care] system is a segmented system…dependant on scarce resources…if you don't have resources, you have a health system with fixed resources. So, there is where the idea of rights fails. There are sectors…where there is an understanding that a right is the obligation of the state to provide free services. I believe that in our country this is a dream…
134	…que es bonito que el fondo global diga, vamos a clasificar tres pacientes con testimonios. Y eso también llega a la gente, testimonios, que tenían tuberculosis que se curaron y que recibieron todo su tratamiento y que ellos están bien. Ahora, cuál es el problema, por ejemplo, teníamos un chofer, un chofer que le	…It's nice that the Global Fund says, 'we're going to classify three patients with testimonials'…and this also gets to the people, testimonials…that had tuberculosis and were cured and received all of their treatment and that they are good. Now, what is the problem, for

	trabajaba a un ONG. Cuando se dieron cuenta que tenía tuberculosis lo corrieron. Lo corrieron del trabajo. Al siguiente día él llevó su subsidio de reposo, le dijeron: Ah! Usted tiene tuberculosis, no, usted se va de acá. Usted tuvo que aplicar al Ministerio del Trabajo. Y era del Hospital la que lo corrió, era una trabajadora de la salud…entonces él dijo que se va, se va porque tiene tuberculosis, aunque el paciente ya tenía como tres meses de tratamiento. Ese es un rechazo, esa es una discriminación. Entonces el hombre se quedó desempleado, con tres hijos que mantener. Es un desempleado más de Nicaragua	example, we had a driver…a driver who worked for an NGO. When they realized that he had TB, they fired him. They fired him from his job. The following day, he went to get his illness benefit and they said to him, 'Ah! You have tuberculosis, no, you get out of here. You had to go apply at the Ministry of Employment'….and it was a hospital that fired him…it was a health care worker…and [then they] said, 'Go, go because you have tuberculosis,' even though the patient had already had around three months of treatment. This is a rejection, this is discrimination. And so the man was left unemployed with three children to maintain. It is one more unemployed person in Nicaragua…
136	hay una presión política, hay una presión de la autoridad; entonces hay un mando de arriba para abajo, "usted tiene que cumplir porque tenemos que cumplir con el Fondo Global, tenemos que cumplir, ejecutar el proyecto en tiempo y forma", entonces esa presión hace también que el grande en el mundo de la cooperación, "el grande come al chiquito", el grande escupe al pequeño. Nosotros hemos sentido eso en varias ocasiones porque si el Fondo global no logra en cierta actividad…o ejecutar el dinero, ejecutarlo de las otras actividades, tipo más que todo capacitación, entonces, claro, como es una prioridad…entonces hubo varios SILAIS que atrasaron su programa o no ejecutaron todo; porque tenían que cumplir el tiempo con el Fondo Global.	…there is a political pressure, there's authoritarian pressure that is top-down, [saying,] "*you* [the SILAIS] have to deliver because *we* have to deliver with the Global Fund…complete the project in due time and proper form", then this pressure also makes it so that the big guy in the world of [international] cooperation eat the small, the little guy is at the mercy of the big. We've felt this on various occasions because if the Global Fund doesn't achieve a certain activity, or use up the money to carry the out [Global Fund activities], usually in trainings, well…it is a priority, but [sometimes] SILAIS were held back in their programming, or didn't complete all of their other activities, because they were pressured to finish things for the Global Fund deadlines…
136	Ah, afecta muchísimo porque mira afecta en cuanto al período en que hay que ejecutar esa actividad, en primer lugar en el período porque por ejemplo, a mí me dice…'Vos tenes que desarrollar tu taller de tuberculosis a las unidades de salud', Yo ya hice mi solicitud desde en enero, diciembre, de diciembre a enero; pero qué pasa…un montón de cosas, si uno no está ahí presionando, que qué pasó con tal solicitud? Ellos vienen desembolsando el dinero como en junio y eso tal vez estaba programado para en marzo. Entonces, después me dicen: hay que ejecutarlo en tiempo y forma. Y entonces viera que problema. Entonces todo va desfasado… pero es por el desembolso…a mí no me gusta que a aparte que la dirección económica del Minsa, hace los desembolsos súper tardíos, también ellos cuando entregan el dinero al SILAIS están presionando que se ejecute en 10 días y eso es inhumano, es incoherente, es antipedagógico, porque al final la gente no aprende sino que sacamos del paso ya por hacerlo y ya está. Y eso no es correcto, porque lo que queremos en esto es que la gente aprenda!	Ah, it has a huge effect because, look, in the first place, [the delays] affect how much time is left in the period in which this activity is supposed to be carried out in because, for example, they say to me, 'You have to develop your tuberculosis workshop for the health posts' and I make my request for January, December…for December to January; but what happens? A pile of things, if one is not there pressuring, what happens with this request? They come disbursing the money in, like, June and this was maybe programmed for March. So then later they say to me, 'You have to carry out the activities in due time and proper form', and so, see the problem? Everything gets out of order…but it is for the disbursement…I don't like that, well, aside from the economic politic of MINSA, they make the disbursements super late…and then, when they hand the money over to the SILAIS, they're pressuring them to use it in ten days, and this is inhumane, it's incoherent, it's anti-pedagogical because in the end the people don't learn but they just walk through the door [so we count them], we do it and that's it. And this isn't right!

		Because what we want in this is that the people learn!
137-138	se está haciendo fuerte inversión en promoción es muy importante pero tiene que ser una promoción sostenida, si tú solamente hablas un día sobre esto, un mes después la gente lo olvida, tiene que ser algo sostenido, entonces ahí hablamos de sostenibilidad de un proyecto tan grande. Si después de cinco años se cae a un nivel mínimo puede ser que se pierde mucho esfuerzo, pero si el personal local sigue sensibilizando a la población, está bien, mucho depende de los compromisos no? de la parte local. A mí siempre me da mucho miedo los proyectos muy grandes porque ya eh tenido experiencias con otros programas grandes, con tanto dinero que se invierte, que no tenes los resultados esperados y...porque a mí me da mucho miedo eso…si se trabaja como, hormiga, poco a poco…. Y poco a poco avanzando, creo que es mejor así, que mucho dinero, se distorsiona a veces el sistema, sistema que no es suficiente fuerte para asimilar eso, pero bueno, eso es mi experiencia. La eficiencia del trabajo de uno o de un grupo, es cada vez más… o el trabajo de uno o de un grupo es cada vez más eficiente cuando tenes más capacidad y compromiso. Y también es con proyectos, porque tú no repitas los mismos errores cada año, pero si tu programa es de dos, tres o sólo cinco años, los primeros años son para hacer los errores, y luego…Cuando terminas de ser más eficiente, ya no tenes recursos!	…they are making a strong investment in promotion and it is very important, but it needs to be a sustainable promotion…if you only talk about this for one day, one month later the people forget it. It has to be something sustainable, so there we're talking about the sustainability of a project that is so big. If after five years, it falls to a minimal level, it could be that much of the effort is lost, but if the local people continue raising awareness among the population, that's good. A lot depends on these commitments, right—at a local level. I'm always afraid of very big projects because I've already had experiences with other big programs, with so much money that they invest, that you don't get the expected results and…why does it scare me? If you work like ants, little by little, and little by little advancing, I believe that it is better this way. With lots of money, sometimes you distort [the reality] of the system…the [public health] system that isn't strong enough to assimilate this…but then, this is my experience. The efficiency of the work of one or of a group is each time more efficient when you have more capacity and commitment. And also with projects, because you don't repeat the same mistakes every year, but if your program is for two, three or only five years, the first years are for making mistakes and later…when you finally get to be more efficient, you don't have any resources left!
138	La verdad de las cosas es de que…como el tiempo que ha pasado que fueron trabajando y leyendo..este…algunas…algunos…este…detalles…pero….usted sabe es muy bien si uno este…no tiene todo la herramienta a la mano, uno se las facilita…pero…pierde tiempo en buscarla. Entonces…este…eh…nosotros necesitamos…*alguien*…y…llevarlo también…por los otros países que…realmente van a hacer las propuestas o que lo están haciendo…estamos alguien que nos esta acompañando…[en el proceso]	The truth is that, as the time passed that they were out working and reading…some of the details…but you know very well that if one doesn't have all of the tools in your hands…you can work through it, but you lose time in looking for them. So, we needed *someone*…and to bring them to the other countries that really are going to do the proposals, or are making proposals…someone accompanying us [in the process]…
139	Lo que pasa es que para la segunda fase, el receptor principal y el su-receptor solicitaron a diferentes instituciones propuestas técnicas para formular la segunda fase. Pero en ese momento, eh, no se aplicaran muchas cosas que en la actualidad se están diciendo de…de cambios. Por ejemplo, ahora también se ha pedido por el país que se…apruebe por el MCP un documento que se llama 'Conflicto de Interese' y otro documento también que eso es el 'Reglamentos del MCP' para su operatividades, sus funciones. Y otro documento que es la	What happened is that for the second phase, the principal receptor and the sub-receptor solicited technical proposals from different institutions to formulate the second phase. But in this moment, they don't follow through with many things that, in actuality, they are saying about changes. For example, they have requested for the country that they approve a document that is called 'Conflict of Interest' for the CCM and another document that is called 'Regulations of the CCM' for its operational

	ampliación de los nuevos su-receptores para fondos de VIH/SIDA. Estas cosas son a partir de la evaluación que se ha hecho, entiendo yo, la primera fase hasta donde estábamos. Y el país ha cumplido pues con estos requerimientos. Creo que son condicionalidades para poder garantizar fondos para la segunda fase. De todos maneras, yo siento personalmente que las reglas del juego han cambiado…en relación con la primera fase. Porque en la primera fase...eh…entiendo yo que, pues, el proyecto se estaba aclimatando, se estaba asentando…a ver de conocer el país. Pero ya en la segunda fase, creo que hay un poquito más de exigencia en términos, creo yo que técnicos…legales…y formales…	functions. And another document that is the expansion of the new sub-receptors for the HIV/AIDS funds. These things are part of the evaluation that they have done, I understand, for the first phase…up to this point where we are. And the country has met these requirements. I believe that they are conditionalities to guarantee funds for the second phase. Anyways, I personally feel that the rules of the game have changed in relation to the first phase. Because in the first phase, I understand that the project was adjusting, settling in…getting to know the country. But already in the second phase, I believe that it has been a little more demanding in technical, legal and formal terms…

Appendix F

Coding Networks

Main Theme	Sub-theme	Branch	Code
Global Fund Project	Impacts on…	Indicators	GFP:Imp:Ind
		Community Involvement	GFP:Imp:Cmy
		Awareness	GFP:Imp:Awr
		Perceived Beneficiaries	GFP:Imp:Ben
		Intersectoral Collaboration	GFP:Imp:Col
		NTP Resources	GFP:Imp:NTP
	Challenges	Delays (Atrasos) /Pressure	GFP:Ch:Atr
		Flexibility	GFP:Ch:Flx
		Evaluation	GFP:Ch:Eval
		Needs versus Resources	GFP:Ch:Nd
	Key Activities	Food Packages	GFP:KA:Fpkg
		Stigma Study (CIES)	GFP:KA:Sdy
		Production of Educational Materials	GFP:KA:Edu
		Training	GFP:KA:Trn
	Sustainability	Dependency on Exernal $	GFP:S:Dep
		Basic Program Needs	GFP:S:Nds
Global Fund—The Instrument	Sustainability	Long-term	GFI:S:LT
	Structure, Process, Policies	Application Process	GFI:Plcy:App
		Accountability/Performance-based	GFI:Plcy:Acc
		Disbursements	GFI:Plcy:Dis
		Support	GFI:Plcy:Spt
		Characteristics	GFI:Plcy:Char
		Sustainability build-in's	GFI:Plcy:S
		Norms	GFI:Plcy:Nrm
		CCM (MCP)	GFI:Plcy:MCP
		Incompatibilities	GFI:Plcy:Inc
		Role as a Donor	GFI:Plcy:Dnr
Context	History	Health Sector	C:Hx:HS
		Political (Revolution, War, post-1990 changes)	C:Hx:Pol
		Employment	C:Hx:Emp
		Social Conditions	C:Hx:Soc
		Migration	C:Hx:Mig
		Health Indicators	C:Hx:Ind
		NGO-Government Relationship	C:Hx:NGO
	Accessibility	Rural/Remote	C:Acc:RR
		Urban	C:Acc:Urb
		Cultural/Geographical/Financial	C:Acc:CGF
		Equity	C:Acc:Eq
	Global Context	IMF/WB	C:G:IMFWB
		Infectious Disease Control	C:G:IDC
		Nicaragua in Global Setting	C:G:Nica
	Local Context	Priorities	C:L:Prty
		Corruption	C:L:Corr
		Implementation of Policy	C:L:Imp
		Finding/securing Funding	C:L:Fdng
		"Desorden"	C:L:Dord
		Salaries	C:L:Sal
		Communication Patterns	C:L:Cpat

		Health Campaigns	C:L:HCamp
		Bureaucracy & Government	C:L:Bur
		Capacity	C:L:Cap
	Culture	Health Beliefs & Behaviours	C:Clt:Bel
		"Seguir Adelante"	C:Clt:Seg
		Motivation/"Malacostombrada"	C:Clt:Mal
		Work Ethic/Behaviour	C:Clt:Wrk
TB Control	Program	Financing	TC:Pg:Fg
		Policy	TC:Pg:Pol
		Communication within	TC:Pg:CmN
		Execution of Activities	TC:Pg:EAct
		Management/Administration	TC:Pg:Mng
		Routes of Access	TC:Pg:RtAc
		Priorities/Prioritization	TC:Pg:Prty
		Accountability	TC:Pg:Acc
		Support/Assistance	TC:Pg:Sup
		History/Context	TC:Pg:Hx
		Actors	TC:Pg:Act
		DOTS Activities	TC:Pg:DOT
	Community	Access to Information/Education	TC:C:Edu
		TB Clubs	TC:C:Clb
		Participation	TC:C:Part
	PATB	Experience of	TC:PAT:Exp
		Characteristics	TC:PAT:Char
		Education	TC:PAT:Edu
		Use of Health Services	TC:PAT:HSv
Health Systems	Health Personnel	Voluntary Health Workers	HS:HP:Vol
		Roles/Responsibilities	HS:HP:Dmd
		Migration/Movement	HS:HP:Mvt
		Salaries	HS:HP:Sal
		Motivation/Commitment	HS:HP:Mot
		Medical Strike	HS:HP:MStk
		Education/Awareness	HS:HP:Edu
		Communication	HS:HP:CN
		Qualifications	HS:HP:Qual
	Private Sector	Cooperation/Collaboration	HS:Pv:Coop
		Motivation/Incentive	HS:Pv:Mot
		Awareness/Knowledge of TB & NTP	HS:Pv:Knw
		Engagement	HS:Pv:Eg
	History/Context	Infrastructure	HS:Hx:Inf
		MINSA	HS:Hx:Min
		Collaboration between Programs	HS:Hx:Col
		Change/Reforms	HS:Hx:Ref
		NicaSalud	HS:Hx:NS
Health Rights	Determinants of Health (DOH)	No Discrimination	HR:DH:Ndis
		Poverty & Associated DOH	HR:DH:Pov
		Health Services	HR:DH:HS
	Equity	Distribution of Resources	HR:Eq:Dstb
		Gender	HR:Eq:Gen
	Addressing	Potential via Government	HR:Add:PGvt
		Potential via Global Fund	HR:Add:PGF
Study	Impacts/Comments		Stud:Imp

Appendix G

Source Documents Promoting Activities Related to three Key Areas of Interest

Table G-1: Promotion of Activities to Improve TB Control via DOTS in Global Fund Documents

Source Document	Section	Directly Quoted Text
Framework Document (GFATM)	II	The purpose of the Fund is to attract, manage and disburse additional resources through a new public-private partnership that will make a sustainable and significant contribution to the reduction of infections, illness and death, thereby mitigating the impact caused by HIV/AIDS, tuberculosis and malaria in countries in need, and contributing to poverty reduction as part of the Millennium Development Goals.
Framework Document (GFATM)	III-H-1	In making its funding decisions, the Fund will support proposals which: (1) Focus on best practices by funding interventions that work and can be scaled up to reach people affected by HIV/AIDS, tuberculosis and malaria
Framework Document (GFATM)	III-H-3	In making its funding decisions, the Fund will support proposals which: (3) Support the substantial scaling up and increased coverage of proven and effective interventions, which strengthen systems for working: within the health sector, across government departments; and with communities
Framework Document (GFATM)	III-H-5 and IV-E	In making its funding decisions, the Fund will support proposals which: (5) Focus on performance by linking resources to the achievement of clear, measurable and sustainable results.
Framework Document (GFATM)	IX-B-1	Program Monitoring and Evaluation of Programs (1) Monitoring of program progress through the use of benchmarks, process and output indicators should be an inherent component of any program. Country Coordination Mechanisms are ideally situated to monitor progress. However, the evaluation f program outcome and impact indicators are more suitable for independent, external organizations. This avoids the moral hazard of non-credible reporting. The Fund should primarily utilize existing reports from the National TB Program, which contain the number of identified active cases of TB those completing therapy, and proportion that are under DOTS therapy, should be accepted by the Fund.

Guidelines for Proposals (Round 2)	I-6	Proposals submitted to the Global Fund should focus on performance by linking resources to the achievement of clear and measurable results.
Guidelines for Proposals (Round 2)	III-41	National Programmatic Context (41) Complementarity and additionality to existing programmes by demonstrating how the resources sought from the Global Fund would complement, add to and be consistent with country level frameworks (such as National Plans, Poverty Reduction Strategies and Sector-wide Approaches, etc.) by building on or scaling up existing efforts and filling existing gaps in national budgets and funding from international donors. The funds from the Global Fund should not replace existing national and international resources.
Guidelines for Proposals (Round 2)	IV-52	The Global Fund will only support proposals that promote technically sound and cost-effective interventions that stimulate and are integral to country partnerships involving the government, civil society, and the private sector. Proposed interventions should be based upon a high quality, recent country situation analysis.
Guidelines for Proposals (Round 2)	Annex I I-1	Soundness of approach, with proposals demonstrating that they: (1) Are consistent with internationally accepted best practices exhibiting scientific soundness
Guidelines for Proposals (Round 2)	Annex I II-1, 3, 4	Feasibility with respect to its proposed implementation plan and management, with proposals demonstrating that they: (1) Are technically and programmatically feasible and relevant in the specific country context; (3) Suppport substantially increased quality and coverage of proven and effective interventions, which strengthen systems for working: within the health and other relevant sectors; across multiple sectors; and with communities (4) Build on, complement, and co-ordinate with existing regional and national programmes in support of national policies, priorities, strategies and partnerships, including Poverty Reduction Strategies and sector-wide approaches
Guidelines for Proposals (Round 2)	Annex I IIB	Illustrative Country Indicators for Tuberculosis Process/outputs; Coverage/outcomes; Impacts—each list DOTS expansion or DOTS data as appropriate or required indicators (*Please refer to document for indicator table).*

Table G-2: Promotion of Private Sector Engagement

Source Document	Section	Directly Quoted Text
Framework Document (GFATM)	III-H-6	In making its funding decisions, the Fund will support proposals which: (6) Focus on the creation, development and expansion of government/private/NGO partnerships.
Framework Document (GFATM)	VI-A-2	Basic principles to guide country processes: (2) The Fund will promote partnerships among all relevant players within the country, and across all sectors of society. It will build on existing coordination mechanisms, and promote new and innovative partnerships where none exist.
Guidelines for Proposals (GFATM--Round 2)	I-3	The Global Fund will base its work on programmes that reflect national ownership and respect country partnership-led formulation and implementation processes. The Global Fund will promote partnerships among all relevant players within the country and across all sectors of society. It will build on existing coordination mechanisms, and promote new and innovative partnerships.
Guidelines for Proposals (GFATM--Round 2)	I-5	The Global Fund will support existing and new innovative programmes both within and outside the health sector that promote public, private and nongovernmental efforts for scaling up the prevention, treatment, care and support to those that are directly affected.
Guidelines for Proposals (GFATM--Round 2)	II-10	The CCM is a body that functions as a forum to promote true partnership development and multi-sectoral programmatic approaches.
Guidelines for Proposals (GFATM--Round 2)	Annex I I-3	These characteristics will serve as a basis for the Technical Review Panel to establish criteria for review of the proposals: I. Soundness of approach, with proposals demonstrating that they: (3) Enables the development, strengthening and expansion of government/private/NGO partnerships.

Table G-3 Promotion of Factors related to Health Rights in Country Proposals

Source Document	Section	Directly Quoted Text
Framework Document (GFATM)	II	The purpose of the Fund is to attract, manage and disburse additional resources through a new public-private partnership that will make a sustainable and significant contribution to the reduction of infections, illness and death, thereby mitigating the impact caused by HIV/AIDS, tuberculosis and malaria in countries in need, and contributing to poverty reduction as part of the Millennium Development Goals.
Framework Document (GFATM)	III-H-10	In making funding decisions, the Fund will support proposals which: (10) Aim to eliminate stigmatization of and discrimination against those infected and affected by HIV/AIDS, especially for women, children and vulnerable groups.
Framework Document (GFATM)	IV-H	The Fund will support public health interventions that address social and gender inequalities, as well as behavior practices that fuel the spread of the three diseases, with an emphasis on health education.
Proposal Guidelines (Round 2)	I-2	As above: Framework Document (GFATM): Section II
Proposal Guidelines (Round 2)	IV-53	Proposals should actively take into account interventions that address social rights and gender inequalities, as well as behavioral practices that fuel the spread of the three diseases...

Appendix H

Supplemental Tables

Table H-1: Health in the Millennium Development Goals[1]

Health Targets	Health Indicators
Goal 1: Eradicate extreme poverty and hunger	
Target 1—Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	
Target 2—Halve, between 1990 and 2015, the proportion of people who suffer from hunger	• Prevalence of underweight children <5 years of age • Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 3—Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	
Goal 3: Promote gender equality and empower women	
Target 4—Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015	
Goal 4: Reduce child mortality	
Target 5—Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	• Under-five mortality rate • Infant mortality rate • Proportion of one-year-old children immunized against measles
Goal 5: Improve maternal health	
Target 6—Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	• Maternal mortality ratio • Proportion of births attended by skilled health personnel
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 7—Have halted by 2015 and begun to reverse	• HIV prevalence among pregnant women aged 15-24 years

[1] Adapted from: WHO. Mellennium Development Goals: Targets and indicators related to health. Health in the Millennium Development Goals 2005 2005 [cited 2005 27 Feb]; Homepage on the Internet]. Available from: http://www.who.int/mdg/gaols/en

the spread of HIV/AIDS	• Condom use rate of the contraceptive prevalence rate • Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
Target 8—Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	• Prevalence and death rates associated with malaria • Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures • **Prevalence and death rates associated with tuberculosis** • **Proportion of tuberculosis cases detected and cured under DOTS**
Goal 7: Ensure environmental sustainability	
Target 9—Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	• Proportion of population using solid fuels
Target 10—Halve by 2015 the proportion of people without sustainable access to safe drinking-water and sanitation	• Proportion of population with sustainable access to an improved water source, urban and rural
Target 11—By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers	• Proportion of population with access to improved sanitation, urban and rural
Goal 8: Develop a global partnership for development	
Target 12—develop further an open, rule-based, predictable, non-discriminatory trading and financial system Target 13—Address the special needs of the least developed countries Target 14—Address the special needs of landlocked countries and small island developing states Target 15—Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term Target 16—In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	
Target 17—In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	• Proportion of population with access to affordable essential drugs on a a sustainable basis
Target 18—In cooperation with the private sector, make available the benefits of new technologies, especially information communications	

Table H-2: Objectives, Indicators and Measures of Progress for the TB Component of "Nicaragua, commitment and action against AIDS, Tuberculosis and Malaria"[2]

Main Program Objectives, Key Indicators and Intended Results/Targets										
Program Objectives		Key Indicators	Baseline	Year 1: Planned Results/Targets				Total Year 1	Plan Year 2	Data Source
				Q1	Q2	Q3	Q4			
1	Strengthen inter-sector actions in eh application of the DOTS strategy, with community participation in 36 municipalities.	Percentage of Health Units implementing community DOTS strategy according to MOH standards and guidelines.	0% (2003)	4 units selected for the implementation of community DOTS	Community DOTS Operational Manual completed according to approved MOH standards and guidelines distributed	250 volunteers trained in community DOTS strategy	250 additional volunteers trained in community DOTS strategy	10% (4 Health Units)	30% (11 Health Units)	MOH-NTP Information system & NicaSalud supervision
2	Promote a behaviour change regarding recognition of the symptoms and the treatment of TB	Percentage of persons over the age of 18, in 36 target municipalities, who can identify the symptoms of TB	Not Available	Responsible agency for base line data contracted	Baseline finished and target for the second year revised	IEC[3] campaign targeted to persons over 18 years of age designed		IEC campaign to promote the identification of under implementation	30% increase above baseline	KPC survey
		Percentage of patients under the NTP abandoning TB treatment before completion	9% (2002)		Evaluation study completed to determine causes of abandonment	Communication campaign under implementation for TB patients to avoid abandonment		8%	7%	MOH-NTP Information system (quarterly reports)

[2] Adapted from: GFATM. Program grant agreement between The Global Fund to Fight AIDS, Tuberculosis and Malaria and Federacion NICASALUD. 2004 [cited 2005 15 Oct]; Document on the Internet]. Available from: http://www.theglobalfund.org/search/docs/2NICT_181_194_ga.pdf

[3] Information, education and communication

Program Objectives		Key Indicators	Baseline	Year 1				Total Year 1	Plan Year 2`	Data Source
				Q1	Q2	Q3	Q4			
3	Contribute to the operative enhancement of the program	Percentage of NTP and laboratory health personnel updated in the National TB care standards and procedures	60% (2001)		25%	56%	80%	80% total	90% total	Supervision NicaSalud
4	Strengthen the implementation of TB preventive actions at the local level	Percentage of recording of expected cases of acid-fast bacilli positive cases (BK+)	70% (2002)		Laboratory equipment purchased	4 clinical laboratories equipped	4 clinical laboratories testing to detect for BK+ cases	75%	80%	MOH-NTP information system
		Percentage of control of contacts carried out on children under 5 years of age	79% (2001)		2666 units of Purifine Protein Derivated (PPD) given and tested	2666 additional units of PPD given and tested	2666 addition units of PPD given and tested	85%	90%	MOH-NTP information system
		Percentage of HIV positive patients requiring chemo-prophylaxis treatment that receive it according to MOH standards and guidelines	0% (2003)	Update of MOH standards and guidelines for chemo-prophylaxis	36 health workers trained in chemo-prophylaxis treatment under MOH standards	5%	10%	10%	25%	MOH-HIV/AIDS and NTP information system
		Number of non-attending patients on the NTP recovered	111 (2002)	375 home visits to monitor patients with high-risk of non-attendance	375 additional home visits to monitor patients with high risk of non-attendance	375 additional home visits to monitor patients with high risk of non-attendance	375 additional home visits to monitor patients with high risk of non-attendance	50 total (non-attending patients recovered)	50 total (non-attending patients recovered)	MOH-NTP information systems

Program Objectives		Key Indicators	Baseline	Year 1 Planned Results/Targets				Total Year 1	Plan Year 2	Data Source
				Q1	Q2	Q3	Q4			
5	Offer quality care to patients admitted to the NTP	Percentage of patients cured with the DOTS strategy	71% (2002)					82%	85%	MOH-NTP information systems
		Number of patients receiving treatment with DOTS-Plus following the Green Light Committee (GLC) guidelines	0 (2003)	Application proposal for GLC submitted		3 MDR-TB patients under treatment	3 additional MDR-TB patients under treatment	6 total patients	12 patients (50% of the actual number of MDR-TB patients)	MOH-NTP and Hospital Rosario Lacayo information systems
		Percentage of TB patients admitted to the NTP that receive counseling and are tested for HIV	0 (2003)		11%	22%	35%	35%	65%	MOH-NTP information systems

Appendix I

Tear-out Copy of Analytical Framework